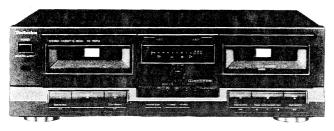
Cassette Deck

ervice Manu

Stereo Cassette Deck

DOLBY B.C NR HX PRO



* Dolby noise reduction and HX PRO headroom extension manufactured under license from Dolby Laboratories Licensing Corporation. HX PRO originated by Bang and Olufsen. "Dolby", the double-D symbol, and "HX PRO" are trademarks of Dolby Labaratories Licensing Corporation.

RS-TR252

Colour

(K) ... Black Type

Area

Suffix for Model No.	Area	Colour
(GC)	Asia, Latin America, Middle Near East and Africa.	(K)
(GN)	Oceania.	

Please file and use this manual together with the service manual for Model No. RS-TR262, Order No. MD9412200C1.

Note: • This service manual is provided to indicate the main differences between the original model No. RS-TR262 (P) and the subsequent model No. RS-TR252 (GC, GN).

ADDITION

ACCESSORIES

[For (GC) area.] AC CORD ADAPTOR (SJP5213-2) 1 pc.



CHANGES

SPECIFICATIONS

RS-TR262 (P)

CASSETTE DECK SECTION Frequency response (Dolby NR off) NORMAL

CrO₂

METAL

GENERAL Power consumption Power supply

40 Hz~15 kHz ±3 dB 20 Hz~17 kHz $40 \text{Hz} \sim 15 \text{kHz} \pm 3 \text{dB}$ 20 Hz~17 kHz $40 \text{Hz} \sim 16 \text{kHz} \pm 3 \text{dB}$ 20 Hz~18kHz

> 17 W AC 60 Hz, 120 V

RS-TR252 (GC, GN)

CASSETTE DECK SECTION Frequency response (Dolby NR off)

NORMÁL

CrO₂

METAL

40 Hz~15kHz±3dB 20 Hz~16 kHz (DIN) $40 Hz \sim 15 kHz \pm 3 dB$ 20 Hz~16 kHz (DIN) 40 Hz~16kHz±3dB 20 Hz~17 kHz (DIN)

22 W

20 W

GENERAL

Power consumption [For (GC) area.]

[For (GN) area.] Power supply

[For (GC) area.] AC 50 Hz/60 Hz, 110 V/127 V/220 V/230 - 240 V [For (GN) area.]

AC 50 Hz/60 Hz, 230-240 V

△ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

Technics

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CHANGE IN REPLACEMENT PARTS LIST

(RS-TR262 Service Manual Pages 29~32, 41.)

Notes: • Mentioned in this parts list is only those different from Model No. RS-TR262 (P). All other parts are the same as for RS-TR262 (P).

• Important safety notice:

Components identified by \triangle mark have special characteristics important for safety.

Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used.

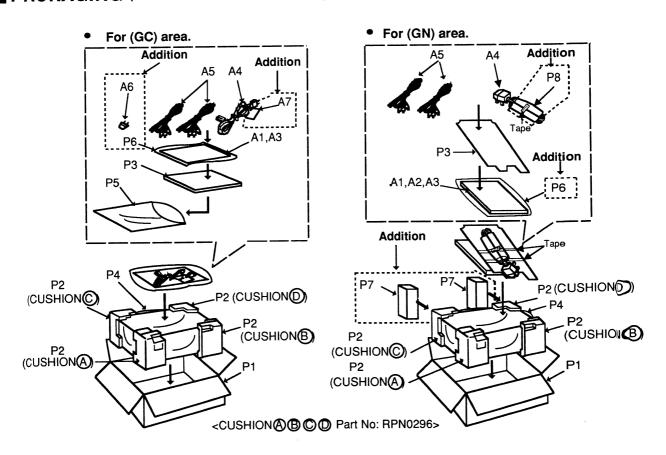
When replacing any of components, be sure to use only manufacturer's specified parts shown in the parts list.

- •The parenthesized indications in the Remarks columns specify the areas. (Refer to the cover page for area.) Parts without these indications can be used for all areas.
- (M) Indicates in the Remarks columns indicates parts supplied by MESA.
- The "(SF)" mark denotes the standard part.

		of Parts No.	Part Name & Description	Remarks	
Ref. No.	RS-TR262 (P) RS-TR252 (GC, GN)		Fait Name & Description	Homane	
TRANSIST	OR(S)				
Q304	KSD471ACYGTA 2SD2037ETA		TRANSISTOR		
Q701	2SC3311AR		TRANSISTOR	Deletion	
VARIABLE	RESISTOR(S)				
VR702	EVJ02SF02G15		BALANCE	Deletion	
TRANSFO	RMER(S)				
	RTP1K		POWER TRANSFORMER	(GC) △	
T1	RTP1K4C008-V	RTP1K4E014-V	POWER TRANSFORMER	(GN) △	
JACK(S)					
		SJS9236	AC INLET	(GC) △	
JK701	SJSD16	SJSD16	AC INLET	(GN) △	
JK702	SJS9331B		AC OUTLET	△ Deletion	
		RSR4A001S-H	VOLTAGE SELECTOR	(M) (GC) △ Addition	
JK703		Management of the second of th		(GN)	
RESISTOR	RS	,			
R609	ERD2FCVG150T	ERD2FCVG120T	1/4W 12Ω	Δ	
R610	ERD2FCVG180T	ERD2FCVG150T	1/4W 15Ω	Δ	
R633, 634	ERD2FCVG330T	ERD2FCVG150T	1/4W 15Ω	Δ	
R635	ERDS2TJ120T	ERDS1FVJ180T	1/2W 18Ω	\triangle	
R636	ERDS2TJ100	ERDS1FVJ220T	1/2W 22Ω	\triangle	
R723	ERDS2TJ153	Environment of the Control of the Co	1/4W 15kΩ	Deletion	
R724	ERDS2TJ102	ERDS2TJ223	1/4W 22kΩ		
R725	ERDS2TJ102	ERDS2TJ823	1/4W 82kΩ		
R726, 727	ERDS2TJ562		1/4W 5.6kΩ	Deletion	
CAPACIT	OR				
C702	ECBT1E103ZF		25 V 0.01μF	Deletion	
CABINET	AND CHASSIS				
2	RFKLSTR262PK	RFKLSTR252PA	CASSETTE LID ASS'Y (DECK1)	(M)	
		RGR0112L-A	REAR PANEL	(M) (GC)	
6	RGR0112K-B1	RGR0112M-A	REAR PANEL	(M) (GN)	
7	RMK0026-7	RFKJTR252GCK	BOTTOM CHASSIS ASS'Y	(M)	
7-1		RFKNSTR252PK	FOOT ASS'Y	(M) Addition	
12	RFKGSTR262PK	RFKGSTR252PK	FRONT PANEL ASS'Y	(M)	
19	RGW0110-K		KNOB, BALANCE	Deletion	
20	RFK0169A-K	RFK0169-K	CASSETTE HOLDER		
34	RFKNSTR252PK		FOOT ASS'Y	(M) Deletion	
35	XTB3+6J	Water Control of the	SCREW	Deletion	

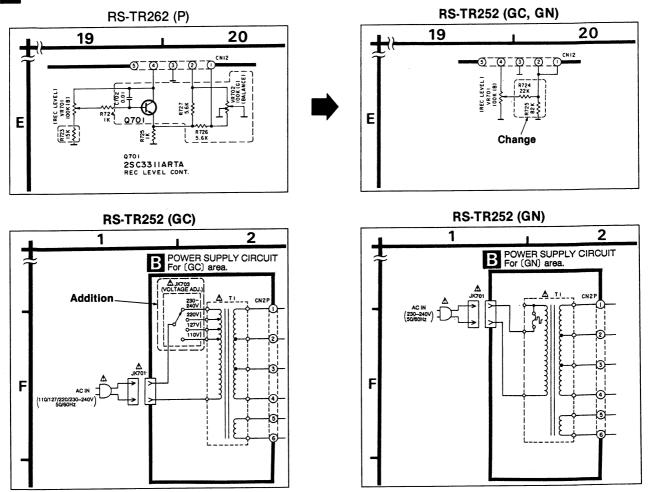
D-f N-	Change	of Parts No.	Part Name & Description	Remarks
Ref. No.	RS-TR262 (P)	RS-TR252 (GC, GN)	rait Name & Description	
PACKING	MATERIAL			
		RPG2524	CARTON BOX	(M) (GC)
P1	RPG2306	RPG2525	CARTON BOX	(M) (GN)
		RPQ0164	ACCESSORIES PAD	(GC)
P3	RPQ0164	RPQ0350-2	ACCESSORIES PAD	(GN)
		XZB24X34C04	PROTECTION BAG (F.B., ACC.)	(GC)
P5	XZB24X34C04			(GN) Deletion
P6		SPB1061	PROTECTION BAG (F.B.)	Addition
				(GC)
P7		RPN0705	CUSHION	(M) (GN) Addition
				(GC)
P8		RPH0032	MIRROR SHEET	(GN) Addition
ACCESSO	PRIES			
		RFKSTR252GCK	INSTRUCTION MANUAL ASS'Y	(M) (GC)
A1	RQT2705-P	RQT2987-G	INSTRUCTION MANUAL	(M) (GN)
				(GC) Deletion
A2	RQA0085	RQX7433ZA	WARRANTY CARD	(GN)
A3	RQCB0391	RQCB0169	SERVICENTER LIST	
		RJA0019-2K	AC POWER SUPPLY CORD	(GC) ∆ (SF)
A4	SJA172	RJA0036-K	AC POWER SUPPLY CORD	(GN) △ (SF)
		SJP5213-2	AC CORD ADAPTOR	(GC) △ Addition
A6				(GN)
		RQE13ZC	VOLTAGE CAUTION LABEL	(M) (GC) Addition
A7				(GN)

■ PACKAGING (RS-TR262 Service Manual Page 41.)

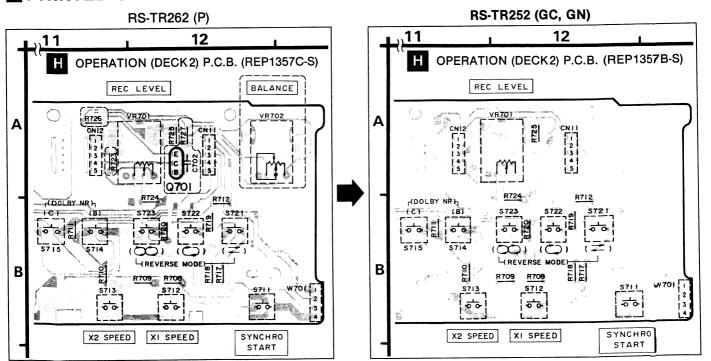


■ SCHEMATIC DIAGRAM (RS-TR262 Service Manual Pages 20, 24.)

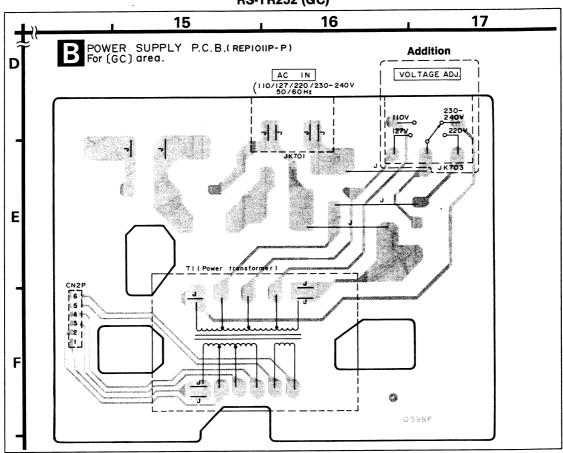
H OPERATION (DECK2) CIRCUIT



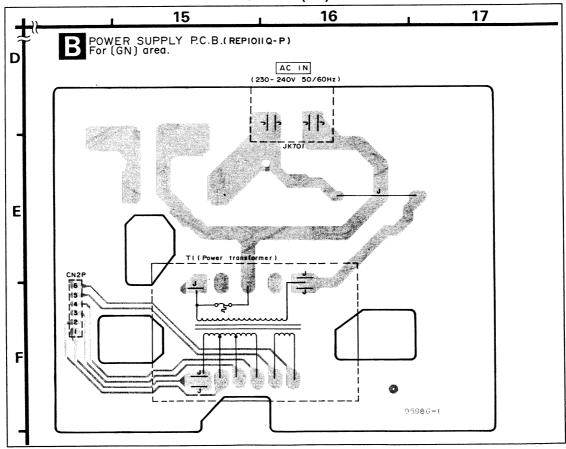
PRINTED CIRCUIT BOARD (RS-TR262 Service Manual Pages 17, 18.)



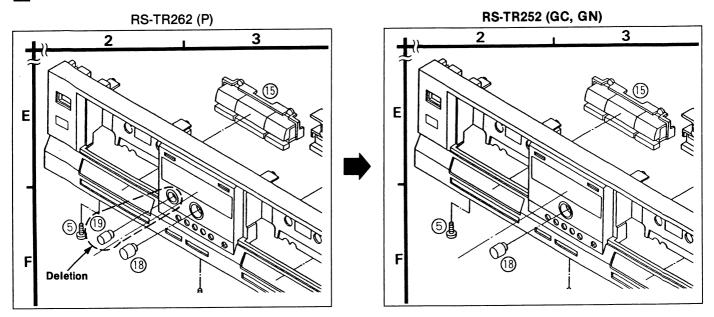
RS-TR252 (GC)

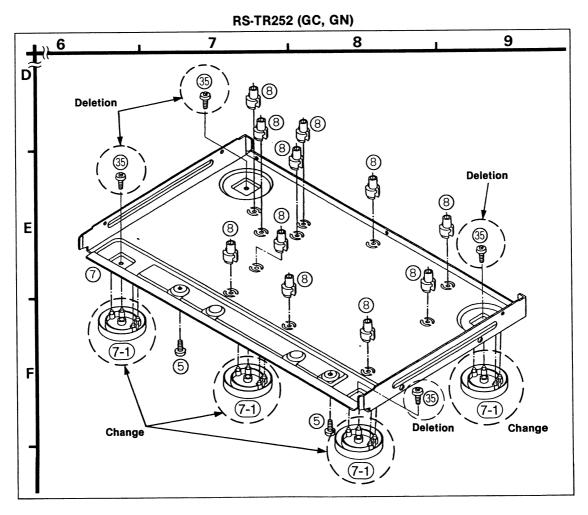


RS-TR252 (GN)



EXPLODED VIEWS (RS-TR262 Service Manual Pages 39, 40.)





rvice Manu

Stereo Cassette Deck

DOLBY B.C NR HX PRO

RS-TR262

Colour

(K) ... Black Type

Area

Suffix for Model No.	Area	Colour
(P)	U.S.A.	(K)

* Dolby noise reduction and HX PRO headroom extension manufactured under license from Dolby Laboratories Licensing Corporation. HX PRO originated by Bang and Olufsen. "Dolby", the double-D symbol, and "HX PRO" are trademarks of Dolby Laboratories Licensing Corporation.

RS-T330R MECHANISM SERIES (AR300)

SPECIFICATIONS

CASSETTE DECK SECTION

Deck system Stereo cassette deck Track system 4-track, 2-channel Recording system AC bias Bias frequency 80 kHz Erasing system AC erase Heads

Deck 1 Playback head (Permalloy) × 1 Deck 2 Recording/Playback head (Permalloy) × 1

Erasing head (Double-gap ferrite) × 1

Motors

Deck 1 Capstan/Reel table drive (DC servo motor) × 1 Deck 2 Capstan/Reel table drive (DC servo motor) x 1 Tape speed 4.8 cm/sec. (17/8 ips) Wow and flutter 0.14% (WRMS)

Fast forward and rewind times

Approx. 110 seconds with C-60 cassette tape

Frequency response (Dolby NR off)

NORMAL 40Hz~15kHz±3dB 20 Hz~17kHz CrO₂ 40Hz~15kHz±3dB

20 Hz~17 kHz METAL 40 Hz~16 kHz±3dB 20 Hz~18kHz S/N (Signal level=max recording level, CrO2 type tape)

NR off 56dB (A weighted) Dolby B NR on 66 dB (A weighted) Dolby C NR on 74dB (A weighted) Input sensitivity and impedance REC (IN)

Output voltage and impedance

PLAY (OUT)

400 mV/800Ω

 $60 \text{ mV}/47 \text{ k}\Omega$

GENERAL

Power consumption Power supply AC 60 Hz. 120 V Dimensions (W \times H \times D) 430 × 116 × 290 mm $(16^{15}/_{16}{''}\times5^{3})_{8}{''}\times11^{13}/_{32}{''})$ Weight 4.7kg (10.4lb.)

Note:

Specifications are subject to change without notice Weight and dimensions are approximate.

Technics

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△ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

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DECK 2 and Cabinet parts)	37~40
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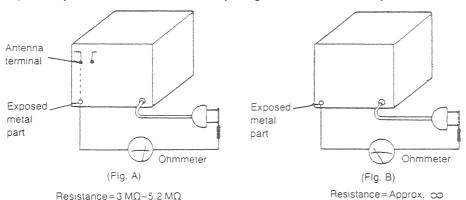
SAFETY PRECAUTION (This "safety precaution" is applied only in U.S.A.)

- 1. Before servicing, unplug the power cord to prevent an electric shock.
- 2. When replacing parts, use only manufacturer's recommended components for safety.
- 3. Check the condition of the power cord. Replace if wear or damage is evident.
- 4. After servicing, be sure to restore the lead dress, insulation barries, insulation papers, shields, etc.
- 5. Before returning the serviced equipment to the customer, be sure to make the following insulation resistance test to prevent the customer from being exposed to a shock hazard.

•INSULATION RESISTANCE TEST

- 1. Unplug the power cord and short the two prongs of the plug with a jumper wire.
- 2. Turn on the power switch.
- 3. Measure the resistance value with ohmmeter between the jumpered AC plug and each exposed metal cabinet part, such as screwheads antenna, control shafts, handle brackets, etc. Equipment with antenna terminals should read between 3 M Ω and 5.2 M Ω to all exposed parts. (Fig. A) Equipment without antenna terminals should read approximately infinity to all exposed parts. (Fig. B)

Note: Some exposed parts may be isolated from the chassis by design. These will read infinity.

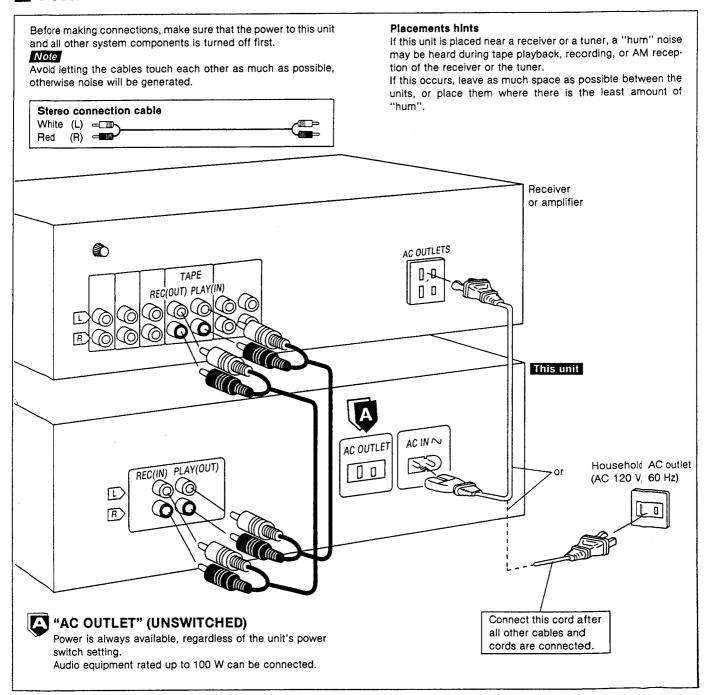


4. If the measurement is outside the specified limits, there is a possibility of a shock hazard. The equipment should be repaired and rechecked before it is returned to the customer.

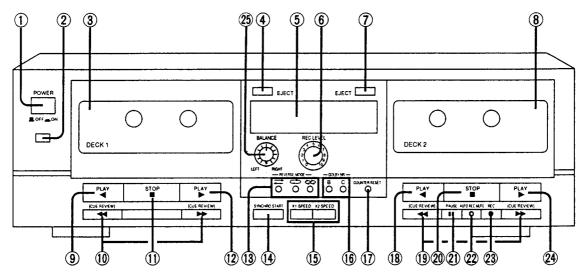
ACCESSORIES



■ CONNECTIONS



■ LOCATION OF CONTROLS



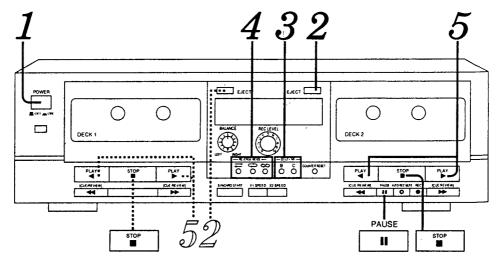
No	. Name
1	Power switch (POWER, ■ OFF ■ ON)
2	Remote control signal receptor (Refer to "About the remote control function" on page 6.)
3	Cassette holder for deck 1
4	Eject button for deck 1 (EJECT)
<u>5</u>	Display
6	Recording-level control (REC LEVEL)
7	Eject button for deck 2 (EJECT)
8	Cassette holder for deck 2
	Reverse-side playback button for deck 1 (◀ PLAY)
10	Fast-forward/cue, rewind/review buttons for deck 1 (◀◀/▶▶ [CUE/REVIEW])
1	Stop button for deck 1 (■ STOP)
12	Forward-side playback button for deck 1 (▶ PLAY)
13	Reverse-mode select buttons (REVERSE MODE)
14)	Synchro-start button (SYNCHRO START)

(5) Tape-to-tape recording-speed buttons (×1 SPEED, ×2 SPEED)

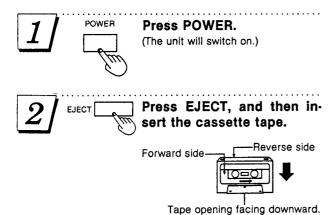
No.	Name
	by noise-reduction buttons LBY NR)
\sim	inter reset button UNTER RESET)
	erse-side playback button for deck 2 PLAY)
_	t-forward/cue, rewind/review buttons fo k 2 (◀◀/▶▶ [CUE/REVIEW])
20 Sto	p button for deck 2 (STOP)
②1) Pau	se button (II PAUSE)
_	omatic-record-muting button AUTO REC MUTE)
23 Rec	ord button (REC)
_	ward-side playback button for deck 2 PLAY)
	ording-balance control (BALANCE)

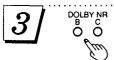
PLAY BACK

Either normal, CrO₂ or metal type cassettes can be used.



The procedures described below are an example of playback on Deck 2.

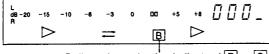




Press either DOLBY NR B or C to select the appropriate noise-reduction system.

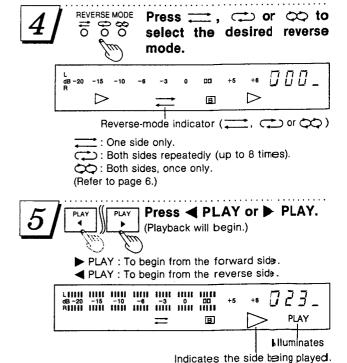
- ^BO Press if the tape was recorded by the type-B Dolby NR system.
 - (The "B" Dolby noise-reduction indicator will then illuminate.)
- C Press if the tape was recorded by the type-C Dolby NR system.

(The "C" Dolby noise-reduction indicator will then illuminate.)



Dolby noise-reduction indicator (B or C)

If neither Dolby noise-reduction system was used, press the button corresponding to the Dolby noise-reduction indicator that is illuminated. (The indicator will then switch OFF.)



To play back on Deck 1, in steps 2 and 5 above, press the buttons ($\mathcal Q$ and $\mathcal T$) for Deck 1.

To temporarily stop playback (Deck 2 only)

PAUSE

Press | PAUSE.

The "PLAY" indicator will flash.

To resume playback, press the play button corresponding to the side of the tape being played.

To stop playback



Press STOP.

The "PLAY" indicator will switch pff.

Reverse function

The reverse function on this unit has three modes (, , , , , ,). Read the descriptions below and select the mode as desired. (Refer to step 4 on page 5.)

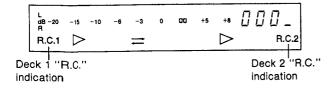
Mode	Tape travel
	Only one side of the tape (either the forward side or the reverse side) will be played, and operation will automatically stop when playback has been completed.
+	Both sides of the tape will be played repeatedly eight times, and then operation will automatically stop. (If playback is begun from the reverse side, the forward side will be played seven times.)
8	When there is a tape in only one of the decks Both sides of the tape will be played once, and then operation will automatically stop. (If playback is begun from the reverse side, the for- ward side will not be played.) When there is a tape in each of the decks The forward and reverse sides of the tape in Deck 1 will be played, followed by the forward and reverse sides of the tape in Deck 2, and after this operation is repeated eight times, operation will automatically stop. (If playback is begun from Deck 2, the tape in Deck 1 will be played seven times.)

About the automatic-tape-select function

This unit is equipped with the automatic-tape-select feature; it automatically detects the type of tape being used, and then makes the suitable adjustments of the bias and equalization accordingly.

About the remote control function

This cassette deck can be operated by using the remote control provided with a Technics receiver. (For detailed information, refer to the operating instructions of the receiver.) During operation from the remote control, the "R.C." indicator will light up.



About the Dolby noise-reduction system

The Dolby noise-reduction system is designed to effectively reduce the annoying high-frequency "hissing" noise typical of cassette tapes. During recording, the system functions to increase the high-frequency sound level, the sound, and then, during playback, that same portion is weakened to bring it back to the previous level.

This unit includes two types of Dolby noise-reduction systems, the Dolby B NR-type and C NR-type.

Dolby B-type noise-reduction

Noise is reduced to about one-third.

Use this system when playing back tapes recorded by the Dolby-B noise-reduction system, such as prerecorded music tapes, etc.

Dolby C-type noise-reduction

Noise is reduced to about one-tenth.

Use this system for the recording and playback of sound sources that have a wide dynamic range and good tone quality, such as FM broadcasts of live performances, etc., and for playing back such tapes.

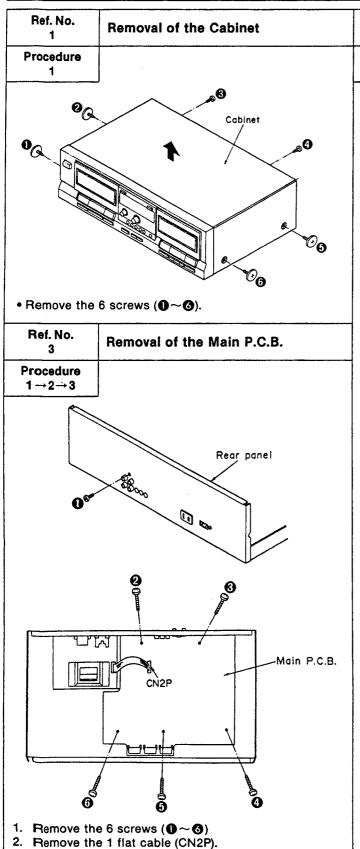
About the Dolby HX-Pro headroom extension system

By functioning to improve the maximum output level of the tape's high-frequency range, this system permits recordings without a reduction in the level of the sound source's high-frequency range. In addition, by using the system in parallel with this unit's noise-reduction system, recording and playback with a greatly extended dynamic range is possible.

DISASSEMBLY INSTRUCTIONS

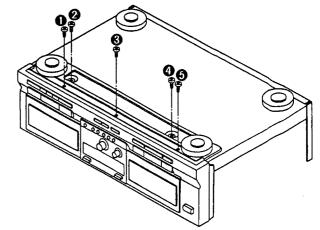
"ATTENTION SERVICER"

Some chassis components may have sharp edges. Be careful when disassembling and servicing.

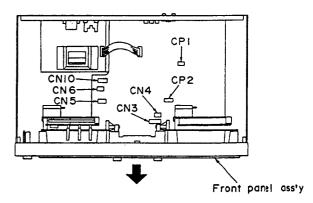


Ref. No. 2 Removal of the Front Panel Ass'y

Procedure 1→2



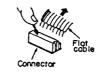
1. Remove the 5 screws ($\mathbf{0} \sim \mathbf{5}$).

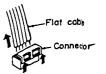


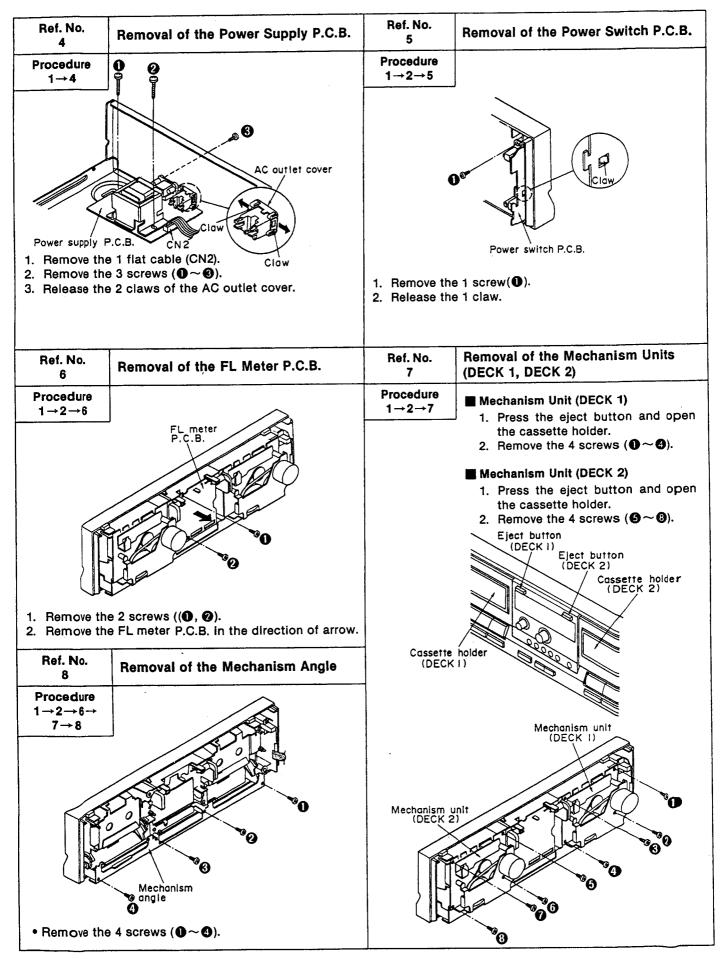
- 2. Remove the 2 connectors (CP1, CP2).
- 3. Remove the 5 flat cables (CN3, CN4, CN5, CN6, CN10).
- 4. Remove the front panel ass'y in the direction of arrow.

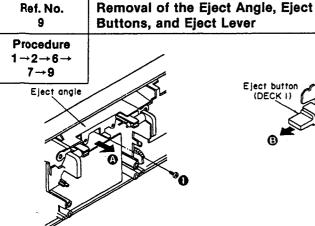
How to remove the Flat Cable

- Pull out the flat cable while pressing the connector. (CN3, CN5)
- 1. Lift the connect or.
- 2. Pull out the flat cable. (CN4, CN6, CN1 ©)

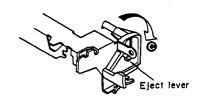


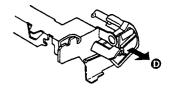












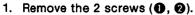
- 1. Remove the 1 screw (1).
- 2. Pull out the eject angle in the direction of arrow (4).
- 3. Pull out the eject buttons in the direction of arrow (3).

(DECK 2)

4. Turn the eject lever in the direction of arrow ②, and remove the eject lever in the hirection of arrow ③.

Ref. No. 10	Removal of the Cassette Holder (DECK 1, DECK 2)
Procedure	
1→2→6→7	
→8→10	
	Damper gear ass'y (L)
	Dairiper gear ass y (L)

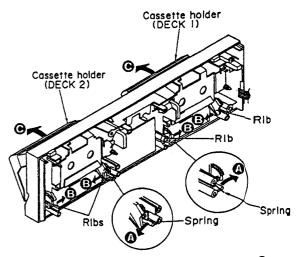
	Damper gear ass'y (R)



Ref. No.

2. Remove the damper gear ass'y (L) and damper gear ass'y (R).

Removal of the Operation (DECK 1)



- 3. Remove the spring in the direction of arrow (4).
- 4. Remove the ribs in the direction of arrow 9.
- 5. Remove the cassette holder in the direction of arrow **©**.

11	P.C.B. and Operation (DECK 2) P.C.B.
Procedure 1→2→6→7 →8→10→11	
Balan	ce knob Rec level knob

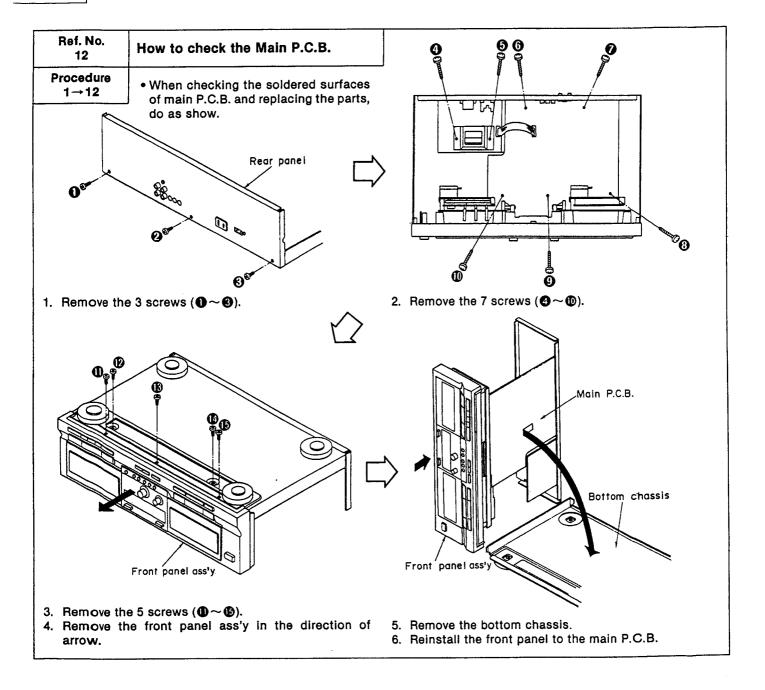
Operation P.C.B.
(DECK 1)

Operation P.C.B.
(DECK 2)

Claws

1. Remove the balance knob and rec level knob.

- 2. Remove the 8 screws ($\mathbf{0} \sim \mathbf{0}$).
- 3. Release the 4 claws.



■ MEASUREMENTS AND ADJUSTMENTS

Measurement Condition

- Recording-level control; Maximum
- Recording-balance control; Center
- Tape-to-tape recording-speed selector; X1 SPEED
- Dolby NR switch; Off

- Make sure heads are clean
- Make sure capstan and pressure roller are clean
- Judgeable room temperature 20±5°C (68±9°F)

Measuring instrument

- EVM (Electronic Voltmeter)
- Oscilloscope
- Digital frequency counter

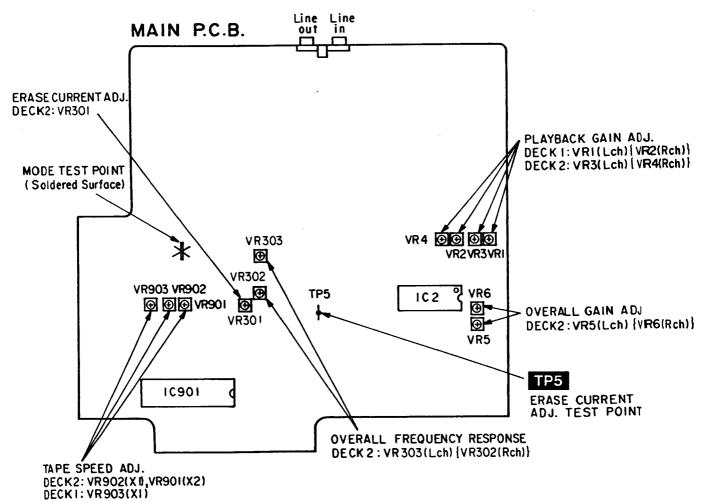
• EVIVI (Electronic volumete

- Test tape

 Head azimuth adjustment (8kHz, −20dB); QZZCFM
- Tape speed adjustment (3kHz, -10dB); QZZCWAT
- Playback gain adjustment (315 Hz, 0 dB); QZZCFM
- Playback frequency response (315Hz, 12.5kHz, 10kHz, 8kHz, 4kHz, 1kHz, 250Hz, 125Hz, 63Hz, -20dB);
 QZZCFM

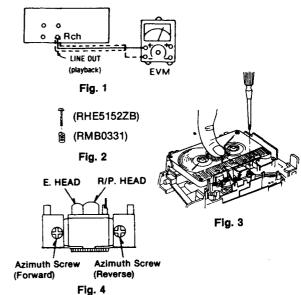
- AF oscillator
- ATT (Attenuator)
- Resistor (600Ω)
- Overall frequency response, Overall gain adjustment, Erase current adjustment
 Normal reference blank tape; QZZCRV2
 CrO₂ reference blank tape; QZZCRX1
 Metal reference blank tape; QZZCRZ5

Adjustment Points



HEAD AZIMUTH ADJUSTMENT (DECK 1/2)

- Please replace both azimuth adjustment screws (RHE5152ZB) and springs (RMB0331) used for to new ones simultaneously when readjusting the head azimuth. (Shown in Fig. 2.) Even if you wish to readjust the head azimuth without replacing the screws and springs, a fine adjustment can not be done because of the screw-locking bond adhered to the azimuth screw and spring.
- Please remove the screw-locking bond left on the head base when replacing the azimuth screw.
- If you wish to readjust the head azimuth, be sure to adjust with adhering the cassette tape closely to the mechanism by pushing the center of cassette tape with your finger. (Shown in Fig. 3.)
- 1. Playback the azimuth adjustment portion (8kHz, -20dB) of the test tape (QZZCFM) in the forward play mode. Vary the azimuth adjusting screw until the output of the R-CH are maximized.
- 2. Perform the same adjustment in the reverse play mode.
- 3. After the adjustment, apply screwlock to the azimuth adjust-



TAPE SPEED ADJUSTMENT (DECK 1/2)

Normal speed (Standard value: 3000 ± 45 Hz)

- 1. Playback the middle portion of the test tape (QZZCWAT).
- 2. Adjust Deck 1=VR903 and Deck 2=VR902 for the output value shown below.

Adjustment target: 3000 ± 15 Hz (NORMAL speed) Stanard value: 3000 ± 45 Hz (NORMAL speed)

High speed [Set the unit to forward (FWD) mode.]

- 3. Short-circuit the TEST jumper ("DECK 1" or "DECK 2" indicator blinks).
- 4. Playback the middle portion on the test tape (QZZCWAT).
- 5. Press the one touch tape edit (High) button. This will set the high speed mode.
- At that time, check if the output from DECK 1 is within the standard value.

Standard value: 6000 ± 600 Hz (HIGH speed)

7. Adjust VR901 so that the output frequency of DECK 2 is within ±30Hz for the value of the output frequency of DECK 1.

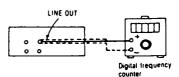


Fig. 5

PLAYBACK GAIN ADJUSTMENT (DECK 1/2)

- 1. Playback the gain adjusted portion (315Hz, 0dB) of the test tape (QZZCFM).
- 2. Adjust Deck 1=VR1 (L-CH) [[VR2 (R-CH)]] and Deck 2=VR3 (L-CH) [[VR4 (R-CH)]] so that the output is within the standard value.

Standard value: $0.4V \pm 0.5dB$

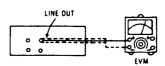


Fig. 6

PLAYBACK FREQUENCY RESPONSE (DECK 1/2)

- 1. Playback the frequency response portion (315Hz,
- 12.5 kHz~63Hz, -20dB) of the test tape (QZZCFM).

 2. Assure that the frequency response is within the range shown in Fig. 8 for both L-CH and R-CH.

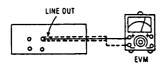


Fig. 7

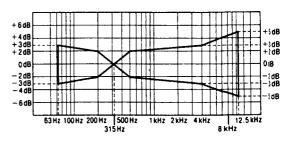
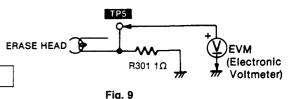


Fig. 8

ERASE CURRENT ADJUSTMENT (DECK 2)

- Insert the Metal blank test tape (QZZCRZ5) and set the unit to the Record Pause mode.
- 2. Adjust **VR301** so that the output between **TP5** and GND is within the standard value.

Standard value: 190±5mA (Metal)...EVM Reading: 190±5mV



OVERALL FREQUENCY RESPONSE (DECK 2)

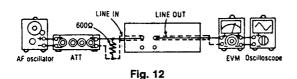
- Insert the Normal blank test tape (QZZCRV2) and set the unit to the Record Pause mode.
- 2. Apply a reference input signal $(1\,\text{kHz}, -24\,\text{dB})$ through an attenuator.
- 3. Attenuate the signal by 20dB and adjust the frequency from 50Hz~10kHz.
- 4. Record the frequency sweep.
- 5. Playback the recorded signal and assure that it is within the range shown in **Fig. 10** in comparison to the reference frequency (1 kHz).
- 6. If it is not within the standard range, adjust VR303 (L-CH) and VR302 (R-CH) so that the frequency level is within the standard range.
 - Level up in high frequency range.....

Increase the bias current.

• Level down in high frequency range.....

Decrease the bias current.

- 7. Repeat steps $2\sim6$ above using the CrO_2 tape (QZZCRX1) and the Metal tape (QZZCRZ5) increasing the frequency range to 12.5 kHz (50 Hz \sim 12.5 kHz).
- 8. Assure that the level is within the range shown in Fig. 11.



Normal Overall frequency response chart (NR OUT)

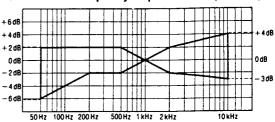


Fig. 10

CrO₂ Metal Overall frequency response chart (NR OUT)

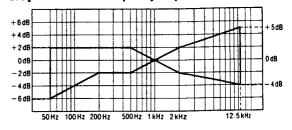


Fig. 11

OVERALL GAIN ADJUSTMENT (DECK 2)

- 1. Insert the Normal blank test tape (QZZCRV2) and set the unit to the Record pause mode.
- 2. Apply a reference input signal (1kHz, -24dB). Attenuate the output so that its level becomes 0.4V.
- 3. Record this input signal.
- 4. Playback the signal recorded in step 3 above, and assure that the output is within the standard value.
- 5. If it is not within the standard value, adjust VR5 (L-CH) and VR6 (R-CH).
- Repeat the step 2~5 above until the output is within the standard value.

Standard value: 0.4 V ± 0.5 dB

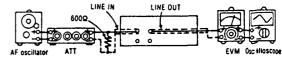


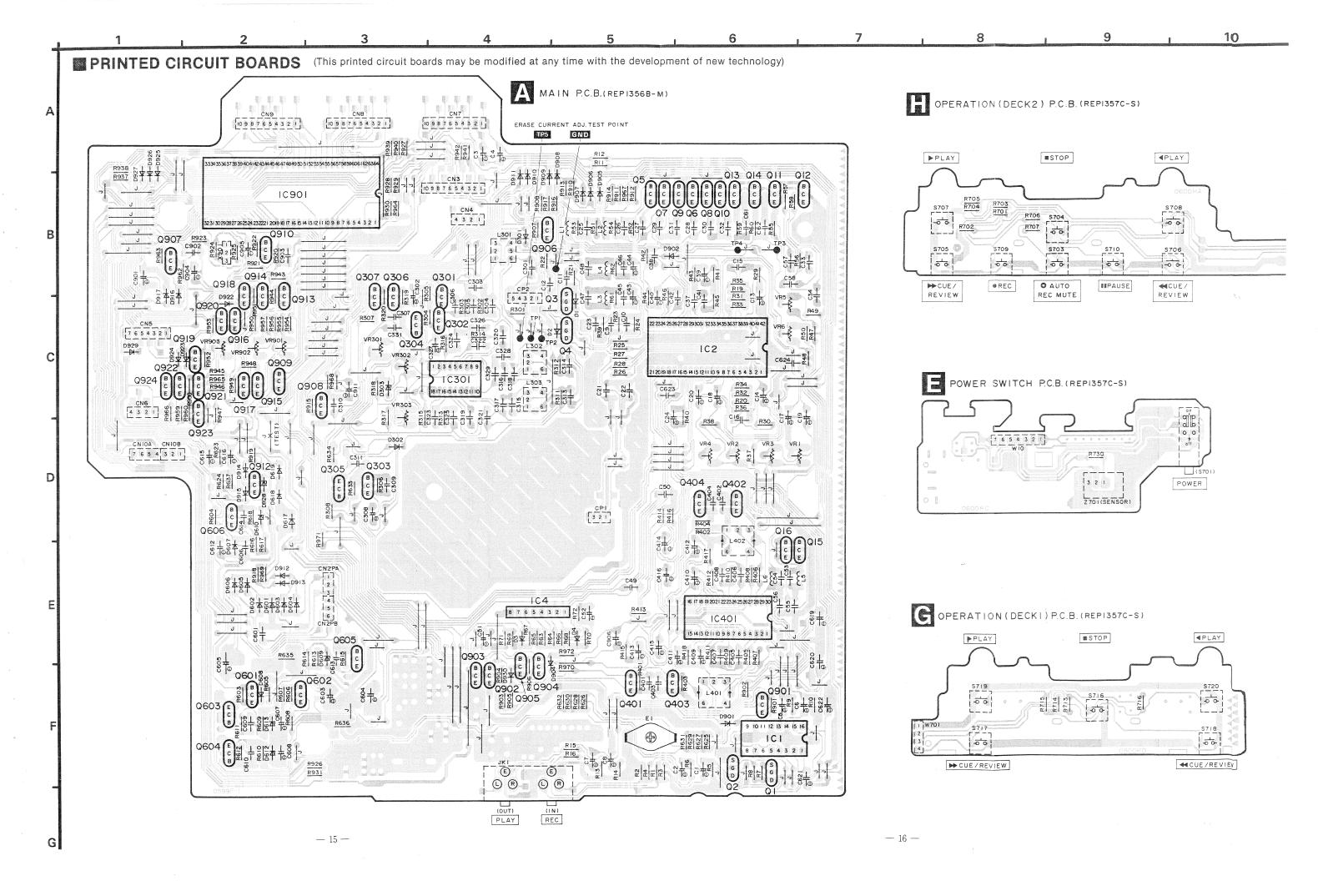
Fig. 13

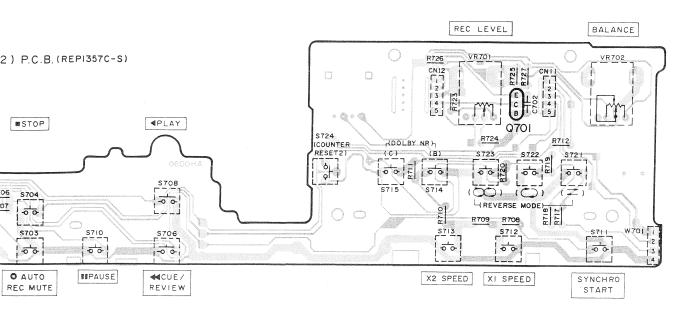
■ TERMINAL FUNCTION OF IC

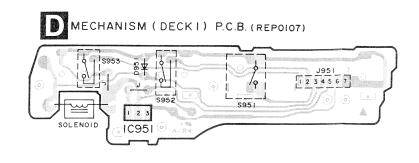
●IC901 (M50942-502SP): MICROCOMPUTER

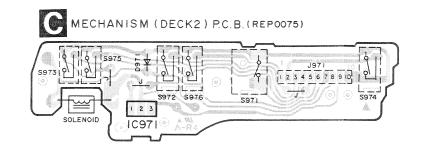
Pin No.	Mark	1/0	Description
1	VREF	ı	Standard voltage terminal (5 V)
2	1 WAY REV	ı	Model select input terminal D1 1 Way"L", D1 Reverse"H"
3	INH	ı	Deck 2 Forward/Reverse Rec. Inh. switch select terminal
4	QUI2		o OND
5	QUI1	1	Connected to GND
6	RIN		
7	LIN	1	Line signal level input terminal
8	KEY 2	I	Key switch scan (DECK 1 STOP, CUE/REV., F. PLAY, REVERSE MODE, C-RES 2)
9	KEY 1	t	Key switch scan (DECK 2: STOP, CUE/REV., F. PLAY, R. PLAY, REC., PAUSE S. START, ×1, ×2, DOLBY B, C NR)
10	B	0	Dolby NR amp. select terminal DOLBY "B""L", etc"H"
11	Ю	0	DOLBY NR amp. select terminal DOLBY "C""L", etc"H"
12	ENC	0	Encode/Decode select terminal ●"H" level in encode mode. •"L" level in decode mode.
13	×2	0	×2 Speed select terminal •"×2""L", etc"H"
14	TP2	0	Deck 2 play select terminal """ level with PLAY/CUE/REVIEW mode. ""H" level with any other mode.
15	CRM	o	CUE/REV. mute terminal • "L" level in muting is off mode. • "H" level in muting is on mode.
16	RMT	0	Rec. amp. mute signal of deck 2 "L" level in mute is off mode. "H" level in mute is on mode.
17	DMT	0	Line out mute terminal "L" level in muting is off mode. "OPEN" when muting is on mode.
18	REC	0	Rec. mode output terminal • "L" level in REC. mode. • "H" level in any other mode.
19	REN	0	Rec. Enable output terminal "L" level in REC. mode "H" level in any other mode
20	SYNC	1	Synchro start signal input terminal •"L"Synchro start
21	REEL 2		Rotation pulse signal of reel table
22	REEL 1	<u> </u>	notation pulse signal of feet table
23	ARM	ı	Auto rec. mute terminal •"L"key "on"
24	POF	ı	Primary AC power detection terminal •"L"off

Pin No.	Mark	1/0	Description
25	R.C	ı	Remote control serial data terminal
26	CN Vss	ı	Connected to Vss.
27	RESET	ı	Reset input terminal •"L"Reset "on"
28	XIN	ı	Clock OSC terminal (4 MHz)
29	X OUT	0	Clock OSC terminal (4 MHz)
30	XC IN	ı	Connected to Vss
31	XC OUT	0	
32	Vss	ı	Connected to GND
33	ф	0	
34	MODE 2	ı	Deck 2 mechanism mode switch select terminal "L"PLAY, CUE/REV. mode
35	HALF 2	ı	Deck 2 cassette half detection switch "L" level in half detection switch in on mode. "H" level in half detection switch in off mode.
36	MODE 1	ı	Deck 1 mechanism mode switch select terminal • "L"PLAY, CUE/REV. mode
37	HALF 1	ı	Deck 1 cassette half detection switch "L" level in half detection switch is on mode. "H" level in half detection switch is off mode.
38	VP	ı	Pull down power supply terminal (~V∞)
39	SPD 2	0	Deck 2 motor speed select terminal • "L" level in "×2" mode • "H" level in "×1" mode
40	CAP 2	0	Deck 2 motor ON/OFF control terminal •"(H" level in "ON"
41	SOL 2	0	Deck 2 solenoid ON/OFF control terminal • "H" level in "ON"
42	SPD 1	0	Deck 1 motor speed select terminal "L" level in "×2" mode "H" level in "×1" mode
43	CAP 1	0	Deck 1 motor ON/OFF control terminal •"H" level in "ON"
44	SOL 1	0	Deck 1 solenoid ON/OFF control terminal • "H" level in "ON"
45 ≀ 56	l S a	0	Segment signal for FL display
57 ≀ 62	G6 ∫ G1	0	Grid signal for FL display
63	AVcc		Power supply terminal (A/D)
		1	











P.C.B. (REPI357C-S)

R730

3 2 1

KI) P.C.B. (REP1357C-S)

■STOP

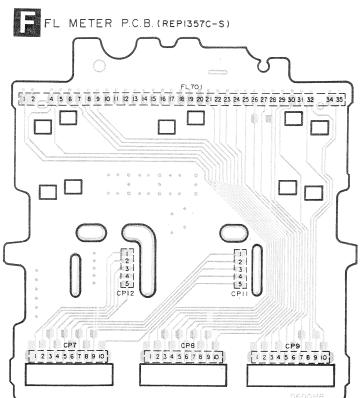
Z701(SENSOR)

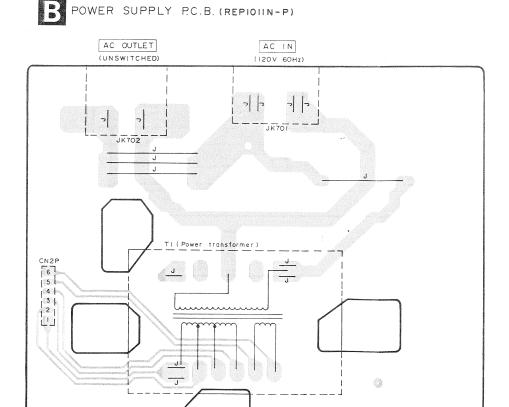
POWER

◀PLAY

44

44 CUE /REVIEW





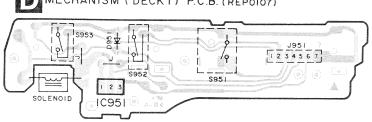
EP1357C-S)

CP8 4 5 6 7 8 9 10

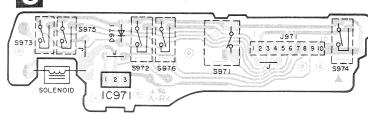
17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 34 35

CP9

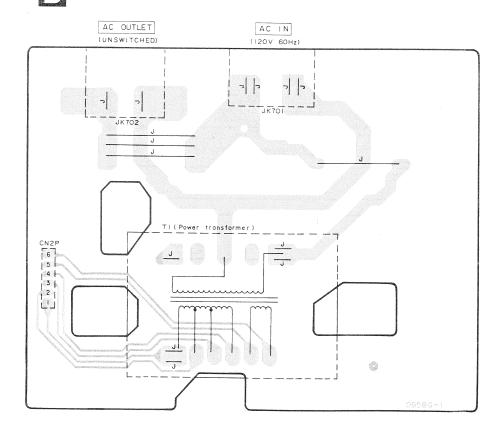




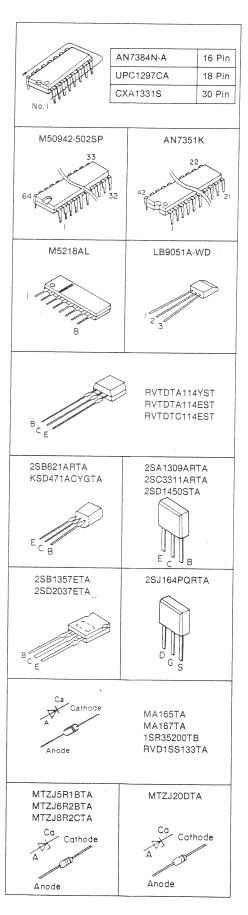


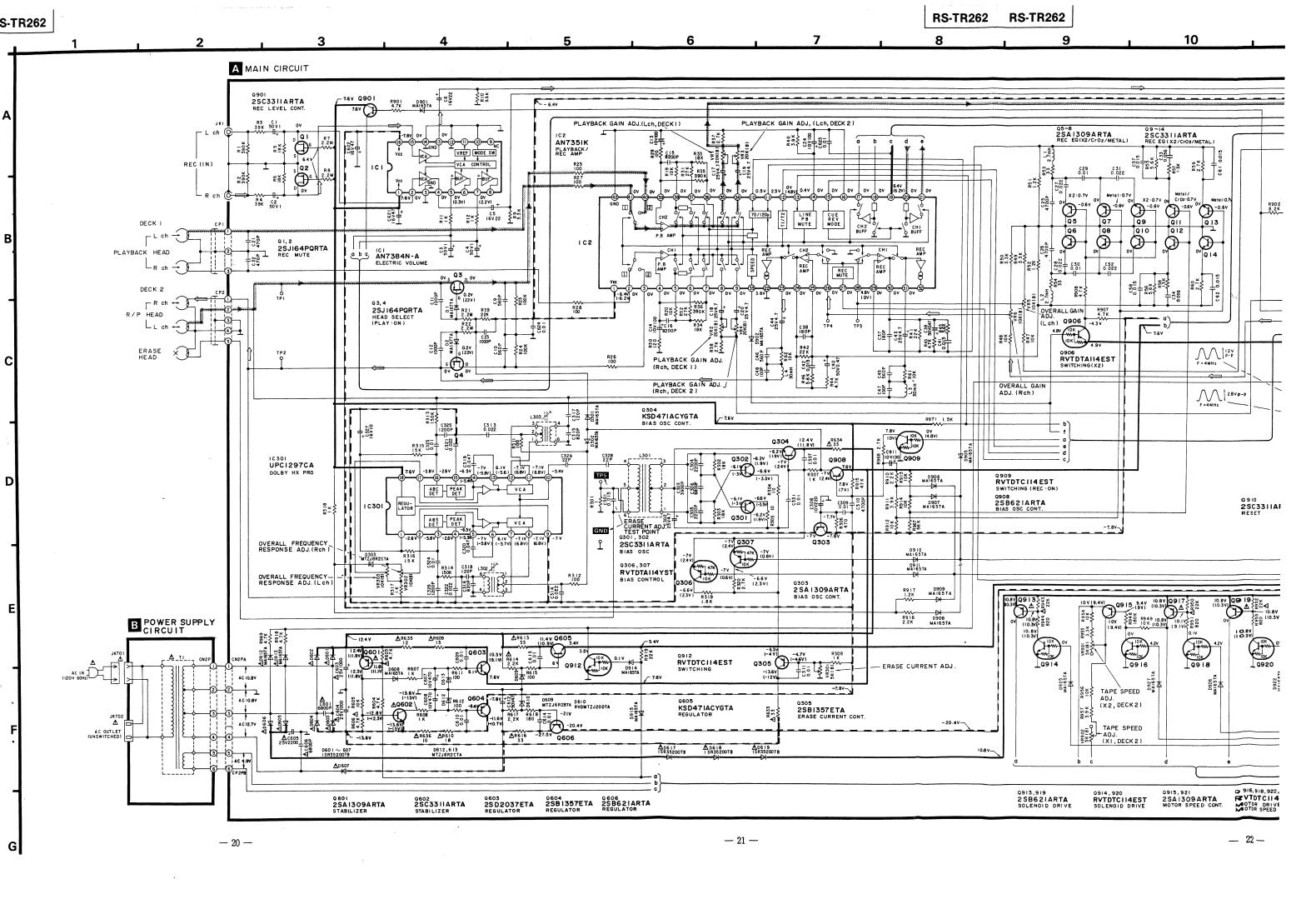


POWER SUPPLY P.C.B. (REPIONN-P)



TERMINAL GUIDE OF IC'S, TRANSISTORS AND DIODES





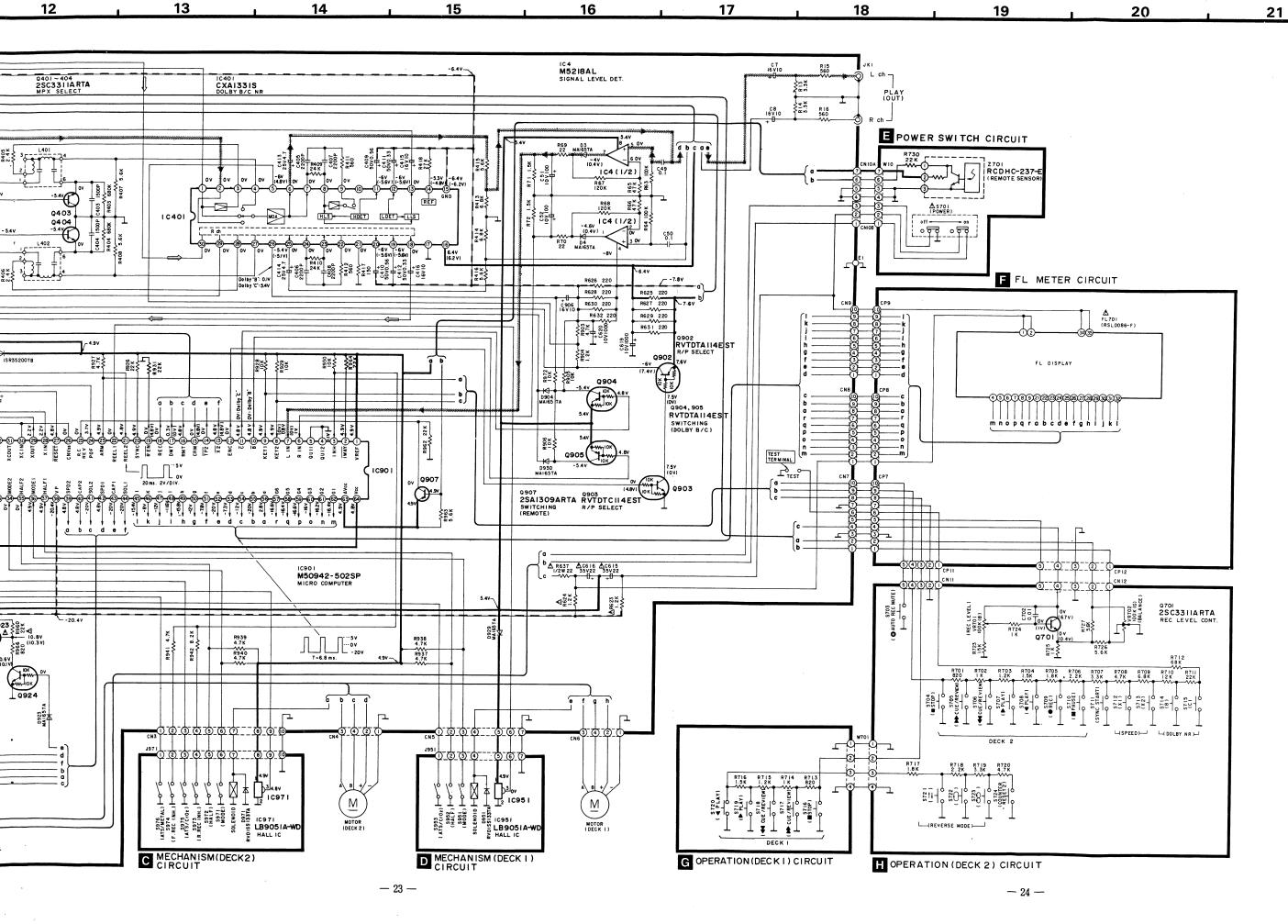
C MECHANISM(DECK2)

D MECHANISM (DECK I) CIRCUIT

G OPERATION (DECK!) CIRCUIT

H OPERATION (DECK 2) CI





■ SCHEMATIC DIAGRAM (Parts list on pages 29~32.)

(This schematic diagram may be modified at any time with the development of new technology.)

- Notes: • S701 : Power switch in "on" position (POWER/ OFF ON). • S703 : DECK 2 Automatic-record-muting switch (AUTO REC MUTE). • S704 : DECK 2 Stop switch (STOP). • S705 : DECK 2 Fast-forward/cue switch (▶▶ CUE). • S706 : DECK 2 Rewind/review switch (◀◀ REVIEW). • S707 : DECK 2 Forward-side playback switch (> PLAY). • S708 : DECK 2 Reverse-side playback switch (◀ PLAY). • S709 : DECK 2 Record switch (REC). • S710 : DECK 2 Pause switch (PAUSE). • S711 : Synchro-start switch (SYNCHRO START). • S712 : Edit-recording tape-speed selector switch (X1 SPEED). • S713 : Edit-recording tape-speed selector switch (X2 SPEED). • S714 : Dolby noise-reduction selector switch (Dolby NR; E). • S715 : Dolby noise-reduction selector switch (Dolby NR; C). • S716 : DECK 1 Stop switch (STOP). • S717 : DECK 1 Fast-forward/cue switch (▶▶ CUE). • S718 : DECK 1 Rewind/review switch (◀◀ REVIEW). • S719 : DECK 1 Forward-side playback switch (> PLAY). • S720 : DECK 1 Reverse-side playback switch (◀ PLAY). • S721 : Reverse-mode switch (REVERSE MODE; ____). • S722 : Reverse-mode switch (REVERSE MODE; • S723 : Reverse-mode switch (REVERSE MODE; C). • S724 : DECK 2 Tape counter reset 2 switch (COUNTER RESET 2). • S951 : DECK 1 Mode switch "off" position. • S952 : DECK 1 Cassette half detection switch in "off" position. • S953 : DECK 1 ATS (CrO₂) switch in "off" position. • S971 : DECK 2 Mode switch in "off" position. • S972 : DECK 2 Cassette half detection switch in "off" position. • S973 : DECK 2 Reverse rec. inhibit switch in "off" position. • S974 : DECK 2 Forward rec. inhibit switch in "off" position. • S975 : DECK 2 ATS (CrO₂) switch in "off" position. • S976 : DECK 2 ATS (Metal) switch in "off" position. • Resistance are in ohms (Ω), 1/4 watt unless specified otherwise. $1 K = 1,000 (\Omega), 1 M = 1,000 k (\Omega)$ \bullet Capacity are in micro-farads (µF) unless specified otherwise. • All voltage values shown in circuitry are under no signal condition and playback mode
- For measurement us EVM.

• Important safety notice

Components identified by △ mark have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.

+B>) indicates +B (bias).) indicates -B (bias).

with volume control at minimum position otherwise specified.

-) indicates the flow of the playback signal.

()......Voltage values at record mode.

- () indicates the flow of the record signal.
- The supply part number is described alone in the replacement parts list.

Ref. No.	Production Part No.	Supply Part No.
IC3, 4	M5218AL	M5218L
Z701	RCDHC-237-E	RCDHC-237

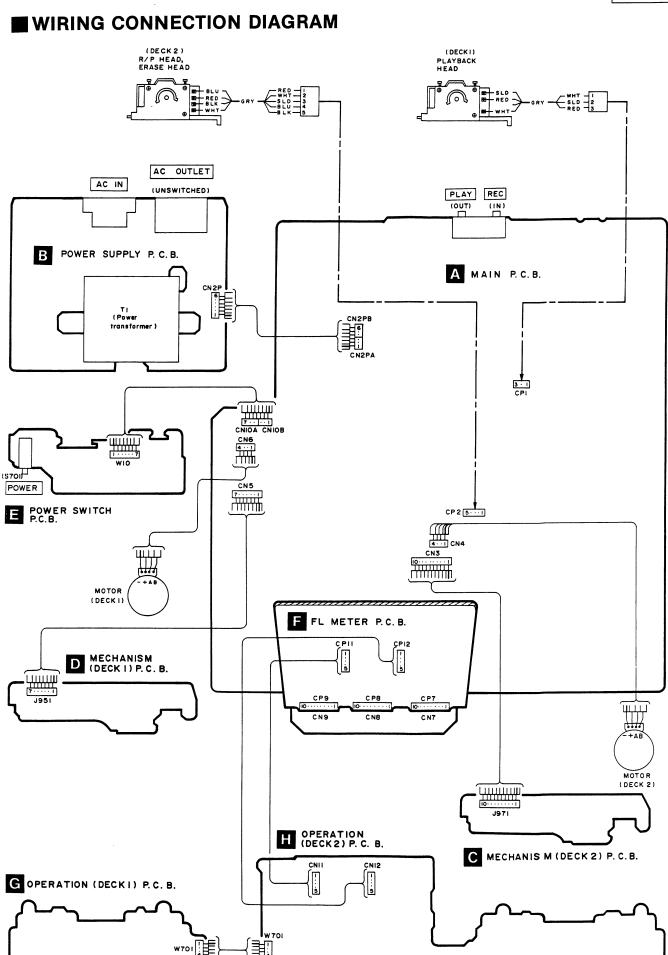
* Caution!

IC and LSI are sensitive to static electricity.

Secondary trouble can be prevented by taking care during repair.

- *Cover the parts boxes made of plastics with aluminum foil.
- *Ground the soldering iron.
- *Put a conductive mat on the work table.
- * Do not touch the legs of IC or LSI with the fingers directly.

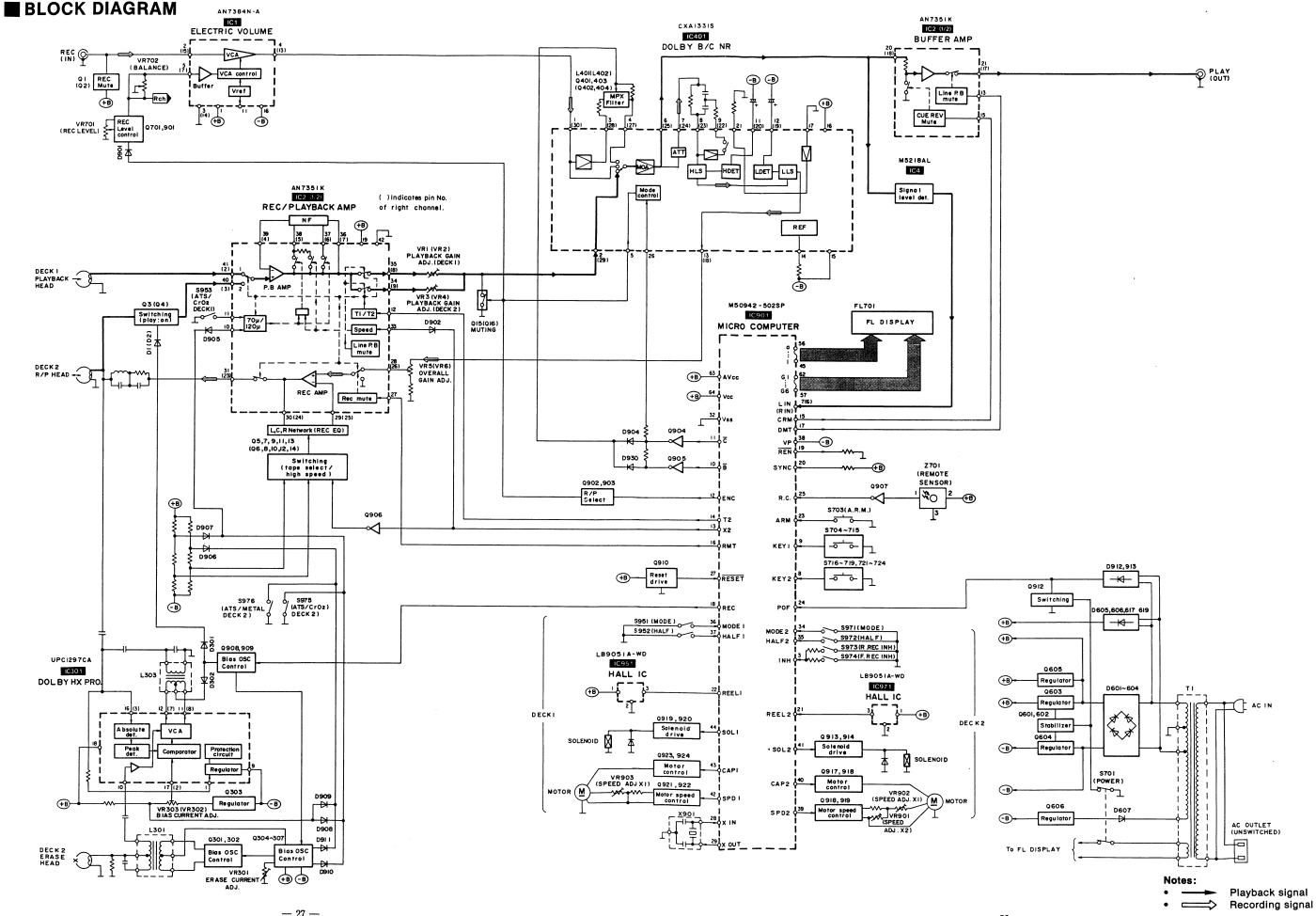
■ WIRING CONNECTION DIAGRAM



— 26 —

RS-TR262





REPLACEMENT PARTS LIST

Notes: *Important safety notice:

*Important safety notice:

Components identified by & mark have special characteristics important for safety.

Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used.

When replacing any of components, be sure to use only manufacturer's specified parts shown in the parts list.

*[M] Indicates in Remarks columns parts that are supplied by MESA.

Ref. No.	Part No.	Part Name & Description	Remarks	Ref. No.	Part No.	Part Name & Description	Remarks
				Q919	2SB621ARTA	TRANSISTOR	Δ
		INTEGRATED CIRCUIT (S)		Q920	RVTDTC114ES	TRANSISTOR	
				Q921	2SA1309A-R	TRANSISTOR	
IC1	AN7384N-A	ELECTRIC VOLUME		Q922	RVTDTC114ES	TRANSISTOR	
IC2	AN7351K	PLAYBACK/REC AMP		Q923	2SB621ARTA	TRANSISTOR	Δ
IC4		SIGNAL LEVEL DET.		Q924	RVTDTC114ES	TRANSISTOR	
IC301		DOLBY HX PRO					
IC401		DOLBY B/C NR				DIODE (S)	
IC901	ļ.,	MICROCOMPUTER					
IC951		HALL (DECK1)		D1, 2	MA167	DIODE	
IC971	LB9051A-WD	HALL (DECK2)		D3, 4	MA165	DIODE	
10011	DDGGGII WD	, , , , , , , , , , , , , , , , , , ,		D301, 302	MA165	DIODE	
		TRANSISTOR(S)		D303	MTZJ8R2CTA	DIODE	
		1141,5151011(0)		D601-607	1SR35200TB	DIODE	Δ
Q1-4	2SJ164PQRTA	TRANSISTOR		D608	MA165	DIODE	
Q5-8	2SA1309A-R	TRANSISTOR		D609		DIODE	
Q9-14	2SC3311AR	TRANSISTOR		D610	MTZJ20DTA	DIODE	
Q15, 16	2SD1450RTA	TRANSISTOR		D612, 613		DIODE	
Q301, 302	2SC3311AR	TRANSISTOR		D617-619	1SR35200TB	DIODE	Δ
Q303	2SA1309A-R	TRANSISTOR		D901, 902	MA165	DIODE	
Q304	KSD471ACYGTA	TRANSISTOR		D904-911	MA165	DIODE	
Q305	2SB1357ETA	TRANSISTOR	DMQ	D912, 913	MA165	DIODE	Δ
Q306, 307	RVTDTA114YST	TRANSISTOR	fud	D914, 915	MA165	DIODE	
Q401-404	2SC3311AR	TRANSISTOR	<u> </u>	D916, 917	1SR35200TB	DIODE	
Q601	2SA1309A-R	TRANSISTOR	Δ	D922-927	MA165	DIODE	
Q602	2SC3311AR	TRANSISTOR	<u>A</u>	D928	MT2J5R1BTA	DIODE	
Q603	2SD2037ETA	TRANSISTOR	[MO	D929, 930	MA165	DIODE	
Q604	·	TRANSISTOR	CMO	D951	RVD1SS133TA	DIODE (DECK1)	
Q605	2SB1357ETA KSD471ACYGTA	TRANSISTOR	(m)	D971	RVD1SS133TA	DIODE (DECK2)	
<u> </u>		TRANSISTOR		- D3/1	IN PIBOTO III	DIODE (DEGILE)	
Q606	2SB621ARTA	 				VARIABLE RESISTOR(S)	
Q701	2SC3311AR	TRANSISTOR				TAITABLE RESISTOR(S)	
Q901	2SC3311AR	TRANSISTOR		VR1-4	EZANDA YVUUBAN	PLAYBACK GAIN ADJ.	
Q902	RVTDTA114SET	TRANSISTOR				OVERALL GAIN ADJ.	-
Q903	RVTDTC114ES	TRANSISTOR		VR5, 6 VR301	EVNDXAAOUB14 EVNDXAAOOB53	ERASE CURRENT ADJ.	
Q904-906	RVTDTA114SET		-			OVERALL FREQ. ADJ.	
Q907	2SA1309A-R	TRANSISTOR		VR302, 303			
Q908	2SB621ARTA	TRANSISTOR		VR701	EVJ02FF02B15	REC LEVEL CONTROL	+
Q909	RVTDTC114ES	TRANSISTOR		VR702	EVJ02SF02G15	TAPE SPEED ADJ.	
Q910	2SC3311AR	TRANSISTOR	_	VR901-903	EVNDXAA00B53	TAPE SPEED ADJ.	-
Q912	RVTDTC114ES	TRANSISTOR		_		COTT (G)	
Q913	2SB621ARTA	TRANSISTOR	Δ	_		COIL (S)	
Q914	RVTDTC114ES	TRANSISTOR		<u> </u>	01.0110=0.41=	0011	+
Q915	2SA1309A-R	TRANSISTOR		L1, 2	SLQX272-1YT	COIL	-
Q916	RVTDTC114ES	TRANSISTOR	<u> </u>	L3, 4	SLQX303-1KT	COIL	
Q917	2SB621ARTA	TRANSISTOR	Δ	L5, 6	RLQB103JT-Y	COIL	
Q918	RVTDTC114ES	TRANSISTOR		L301	SL09B4-K	COIL	

Ref. No.	Part No.	Part Name & Description	Remarks	Ref. No.	Part No.	Part Name & Description	Remarks
L302, 303	SL09B1-Z	COIL					
L401, 402	QLM9Z10K	COIL		CN2P	RJS6T5ZA	CONNECTOR (6P)	
				CN2PA	RJS1A6603	CONNECTOR (3P)	
		TRANSFORMER (S)		CN2PB	RJS1A6603	CONNECTOR (3P)	
				CN3	RJS10T4ZA	CONNECTOR (10P)	
Γ1	RTP1K4C008-V	POWER TRANSFORMER	Δ	CN4	RJS1A6604	CONNECTOR (4P)	
				CN5	RJS7T4ZA	CONNECTOR (7P)	
		REMOTE SENSOR(S)		CN6	RJS1A6604	CONNECTOR (4P)	
				CN7-9	RJU003K010M1	SOCKET (10P)	
Z701	RCDHC-237	REMOTE SENSOR		CN10A	RJS1A6604	CONNECTOR (4P)	
		- 193		CN10B	RJS1A6603	CONNECTOR (3P)	
		OSCILLATOR(S)		CN11, 12	SJS50581BB	SOCKET (5P)	
				CP1	RJP3G18ZA	CONNECTOR (3P)	
(901	EFOGC4004A4	CERAMIC FILTER (4MHz)		CP2	RJP5G18ZA	CONNECTOR (5P)	
				CP7-9	RJT003K010M1	CONNECTOR (10P)	
	<u> </u>	DISPLAY TUBE(S)		CP11, 12	SJT30548BB1	CONNECTOR (5P)	
	-			10,11,12	N TOOLONDI	John Do Long (OI)	
L701	RSL0086-F	DISPLAY TUBE	Δ			JACK(S)	
2101	- LUOUUU I	PIOLICI TODE	<u> </u>			טמטוו (ט)	
	-	SWITCH(ES)		- JK1	SJF3069N	TERMINAL BOARD	
		SWITCH(E2)		⊣ 	SJSD16		Δ
701	DCDapata I	DOUGE	DC A	JK701	· · · · · · · · · · · · · · · · · · ·	AC INLET	Δ
	RSP2B012-J	POWER	[MO 🕰	JK702	SJS9331B	AC OUTLET	Δ
703	EVQ21405R	AUTO REC MUTE (DECK2)				O.D. D. D. (G)	
704	EVQ21405R	STOP (DECK2)				GND PART(S)	
705	EVQ21405R	F. F. (DECK2)		<u> </u>			
706	EVQ21405R	REW. (DECK2)		E1	SNE1004-2	GND PLATE	
5707	EVQ21405R	F. PLAYBACK (DECK2)					
3708	EVQ21405R	R. PLAYBACK (DECK2)		<u> </u>		FLAT CABLE (S)	
709	EVQ21405R	REC (DECK2)					
710	EVQ21405R	PAUSE (DECK2)		W2P		FLAT CABLE (6P)	
711	EVQ21405R	SYNCHRO START		W3		FLAT CABLE (10P)	
712	EVQ21405R	EDITING TAPE SPEED (X1)		₩4	RWJ1804160QQ	FLAT CABLE (4P)	
713	EVQ21405R	EDITING TAPE SPEED (X2)		₩5	RWJ1107210QQ	FLAT CABLE (7P)	
714	EVQ21405R	DOLBY NR B		W6	RWJ1804160QQ	FLAT CABLE (4P)	
715	EVQ21405R	DOLBY NR C	-	₩10	RWJ1807300KQ	FLAT CABLE (7P)	
716	EVQ21405R	STOP (DECK1)		W701	RWJ1804047DD	FLAT CABLE (4P)	(M)
71 7	EVQ21405R	F. F. (DECK1)					
718	EVQ21405R	REW. (DECK1)					
719	EVQ21405R	F. PLAYBACK (DECK1)					
720	EVQ21405R	R. PLAYBACK (DECK1)					
721-723	EVQ21405R	REVERSE MODE					
724	EVQ21405R	COUNTER RESET2 (DECK2)					
351	RSH1A89ZB-U	MODE (DECK1)				!	
152	RSH1A90YB-U	HALF (DECK1)					
153	RSH1A90YB-U	ATS (DECK1)		1			
371	RSH1A89ZB-U	MODE (DECK2)		1			
372	RSH1A90YB-U	HALF (DECK2)		1			
373		R. REC INH. (DECK2)					
974		F. REC INH. (DECK2)		-			
975, 976	RSH1A90YB-U	ATS (DECK2)					
, , , , ,	יייייייייייייייייייייייייייייייייייייי	III (PLUILL)					
		CONNECTOR (S) AND SOCKET (S)		-			

■ RESISTORS AND CAPACITORS

Notes: * Capacity values are in microfarads (uF) unless specified otherwise, P=Pico-farads (pF) F=Farads (F)

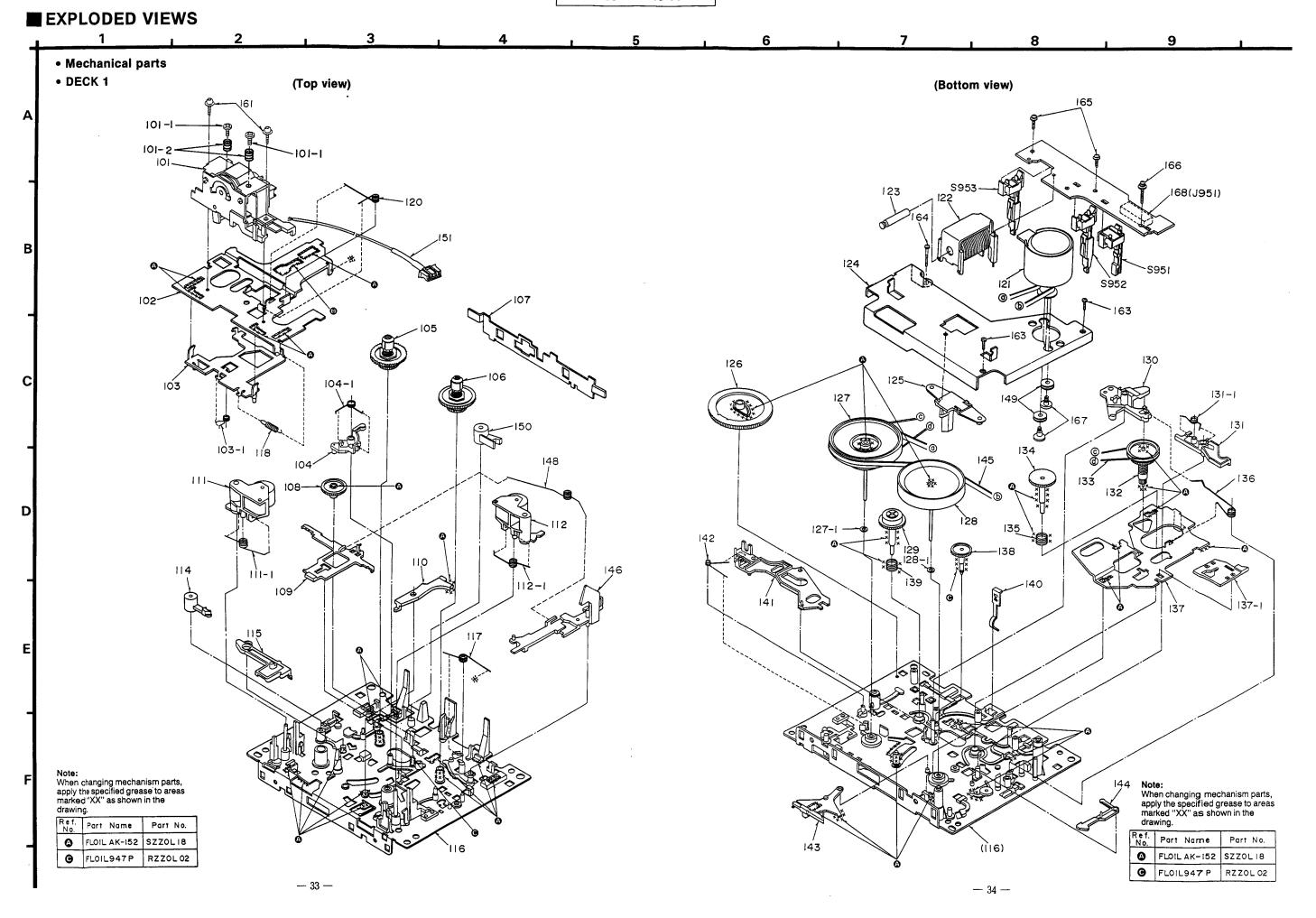
* Resistance values are in ohms, unless specified otherwise, 1 K=1,000 (OHM), 1 M=1,000k (OHM)

* [M] Indicates in Remarks columns parts that are supplied by MESA.

Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks
			R401-404	ERDS2TJ684	1/4W 680K	R723	ERDS2TJ153	1/4W 15K
		RESISTORS	R405, 406	ERDS2TJ242	1/4W 2.4K	R724, 725	ERDS2TJ102	1/4W 1K
			R407, 408	ERDS2TJ562	1/4W 5. 6K	R726, 727	ERDS2TJ562	1/4W 5.6K
R1, 2	ERDS2TJ394	1/4W 390K	R409, 410	ERDS2TJ243T	1/4W 24K	R730	ERDS2TJ223	1/4W 22K
R3, 4	ERDS2TJ393	1/4W 39K	R411, 412	ERDS2TJ561	1/4W 560	R901	ERDS2TJ472	1/4W 4.7K
R5, 6	ERDS2TJ183T	1/4W 18K	R413, 414	ERDS2TJ682T	1/4W 6.8K	R902	ERDS2TJ822	1/4W 8.2K
R7, 8	ERDS2TJ225	1/4W 2.2M	R415, 416	ERDS2TJ562	1/4W 5. 6K	R903	ERDS2TJ472	1/4W 4.7K
R9, 10	ERDS2TJ332	1/4W 3.3K	R417	ERDS2TJ151	1/4W 150	R904	ERDS2TJ122	1/4W 1.2K
R11, 12	ERDS2TJ102	1/4W 1K	R418	ERDS2TJ273	1/4W 27K	R905, 906	ERDS2TJ103	1/4W 10K
R13, 14	ERDS2TJ332	1/4W 3.3K	R603	ERDS2TJ472	1/4₩ 4.7K A	R907, 908	ERDS2TJ472	1/4W 4.7K
R15, 16	ERDS2TJ561	1/4W 560	R604	ERDS2TJ472	1/4W 4.7K	R910	ERDS2TJ222	1/4W 2.2K
R19, 20	ERDS2TJ103	1/4W 10K	R605	ERDS2TJ103	1/4W 10K	R911	ERDS2TJ392T	1/4W 3.9K
R21, 22	ERDS2TJ225	1/4W 2.2M	R606	ERDS2TJ472	1/4₩ 4.7K Δ	R912-914	ERDS2TJ103	1/4W 10K
R23, 24	ERDS2TJ104	1/4W 100K	R607, 608	ERDS2TJ102	1/4W 1K	R915	ERDS2TJ473	1/4W 47K
R25-28	ERDS2TJ101	1/4W 100	R609	ERD2FCVG150T	1/4W 15 A	R916	ERDS2TJ222	1/4W 2.2K
R29, 30	ERDS2EJ121	1/4W 120	R610	ERD2FCVG180T	1/4W 18 🛆	R917	ERDS2TJ122	1/4W 1.2K
R31, 32	ERDS2TJ273	1/4W 27K	R611, 612	ERDS2TJ101	1/4W 100	R918	ERDS2TJ472	1/4W 4.7K
R33, 34	ERDS2TJ183T	1/4W 18K	R613	ERD2FCVG330T	1/4₩ 33 Δ	R919	ERDS2TJ223	1/4W 22K
R35, 36	ERDS2TJ394	1/4W 390K	R614	ERDS2TJ222	1/4W 2.2K A	R920	ERDS2TJ392T	1/4W 3.9K
	 	1/4W 2.7K	R615	ERDS2TJ101	1/4W 100	R921	ERDS2TJ471	1/4W 470
R37, 38	ERDS2TJ272T	1/4W 22K	R616	ERD2FCVG330T	1/4W 33 A	R922, 923	ERDS2TJ103	1/4₩ 10K
R39	ERDS2TJ223	1/4W 3.9K	R617	ERDS2TJ222	1/4W 2.2K	R924	ERDS2TJ102	1/4W 1K
R40	ERDS2TJ392T	1/4W 3. 3K	R618	ERDS2TJ181T	1/4W 180	R925	ERDS2TJ105T	1/4W 1M
R41, 42	ERDS2TJ223		R623, 624	ERDS2TJ122	1/4W 1.2K A	R926	ERDS2TJ223	1/4W 22K
R43, 44	ERDS2TJ472	•	R625-632	ERDS2TJ221	1/4W 220	R927	ERDS2TJ472	1/4W 4.7K
R45, 46	ERDS2TJ562	1/4W 5.6K 1/4W 10K	R633, 634	ERD2FCVG330T	1/4W 33 A	R928-930	ERDS2TJ103	1/4W 10K
R47, 48	ERDS2TJ103		R635	ERDS2TJ120T	1/4W 12 A	R931	ERDS2TJ223	1/4W 22K
R49, 50	ERDS2TJ332	1/4W 3. 3K 1/4W 1. 2K	R636	ERDS2TJ100	1/4W 10 A	R937-941	ERDS2TJ472	1/4W 4.7K
R51, 52	ERDS2TJ122	<u> </u>	R637	ERDS1FVJ220T	1/2W 22 A	R942	ERDS2TJ822	1/4W 8. 2K
R53, 54	ERDS2TJ330	ļ	R701	ERDS2TJ821	1/4W 820	R943	ERDS2TJ223	1/4₩ 22K Δ
R55, 56	ERDS2TJ562		R702	ERDS2TJ102	1/4W 1K	R944	ERDS2TJ821	1/4W 820
R57, 58	ERDS2TJ152	1/4W 1.5K	R702	ERDS2TJ102 ERDS2TJ122	1/4W 1. 2K	R945	ERDS2TJ221	1/4W 220
R59, 60	ERDS2TJ272T	1/4W 2.7K			1/4W 1. 5K	R946	ERDS2TJ103	1/4W 10K
R61, 62	ERDS2TJ103	1/4W 10K	R704 R705	ERDS2TJ152 ERDS2TJ182	1/4W 1. 8K	R947	ERDS2TJ392T	1/4W 3.9K
R63, 64	ERDS2TJ104	1/4W 100K				R948	ERDS2TJ184T	1/4W 180K
R65, 66	ERDS2TJ473	1/4W 47K	R706	ERDS2TJ222		R949	ERDS2TJ103	1/4W 10K
R67, 68	ERDS2TJ124T	1/4W 120K	R707	ERDS2TJ332		R950	ERDS2TJ223	1/4W 22K A
R69, 70	ERDS2TJ220T	1/4W 22	R708	ERDS2TJ472	1/4W 4.7K 1/4W 6.8K	R951	ERDS2TJ821	1/4W 820
R71, 72	ERDS2TJ152	1/4W 1.5K	R709	ERDS2TJ682T		R952	ERDS2TJ223	1/4₩ 22K Δ
R301	ERDS2TJ1R0	1/4W 1.0	R710	ERDS2TJ123		R953	ERDS2TJ821	1/4W 820
R302, 303	ERDS2TJ183T	1/4W 18K	R711	ERDS2TJ223	1/4W 22K	R954	ERDS2TJ1021	1/4W 10K
R304, 305	ERDS2TJ100	1/4W 10	R712	ERDS2TJ683	1/4W 68K	R955	ERDS2TJ332	1/4W 3. 3K
R306	ERDS2TJ471	1/4W 470	R713	ERDS2TJ821	1/4W 820	R956	ERDS2TJ103	1/4W 10K
R307, 308	ERDS2TJ102	1/4W 1K	R714	ERDS2TJ102	1/4W 1K			1/4W 3. 9K
R311, 312	ERDS2TJ101	1/4W 100	R715	ERDS2TJ122	1/4W 1. 2K	R957	ERDS2TJ392T ERDS2TJ184T	1/4W 180K
R313, 314	ERDS2TJ154	1/4W 150K	R716	ERDS2TJ152	1/4W 1.5K	R958		
R315, 316	ERDS2TJ153	1/4W 15K	R717	ERDS2TJ182	1/4W 1.8K	R959	ERDS2TJ103	
R317, 318	ERDS2TJ102	1/4W 1K	R718	ERDS2TJ222	1/4W 2. 2K	R960	ERDS2TJ223	1/4W 22K A
R319	ERDS2TJ182	1/4W 1.8K	R719	ERDS2TJ332	1/4W 3. 3K	R962	ERDS2TJ223	1/4W 22K
R320	ERDS2TJ272T	1/4W 2.7K	R720	ERDS2TJ472	1/4W 4.7K	R963	ERDS2TJ562	1/4W 5.6K

Ref. No.	Part No.	Values & Remarks	Ref. No.	Part No.	Values & Remarks			
R964	ERDS2TJ223	1/4W 22K	C319, 320	ECQV1H473J23	50V 0. 047U			
3965	ERDS2TJ153	1/4W 15K	C321, 322	ECQB1H223JF3	50V 0. 022U			
R966	ERDS2TJ821	1/4W 820	C323, 324	ECQB1H103JF3	50V 0.01U			
2967	ERDS2TJ563	1/4W 56K	C325, 326	ECKT1H122KB	50V 1200P			
2968	ERDS2TJ272T	1/4W 2.7K	C327	ECEA1CKA100B	16V 10U			
2969, 970	ERDS2TJ472	1/4W 4.7K	C328, 329	ECCR1H22OJC5	50V 22P			
1971	ERDS2TJ152	1/4W 1.5K	C331	ECKR1H103ZF5	50V 0.01U			
3972	ERDS2TJ103	1/4W 10K	C401, 402	ECKT1H122KB	50V 1200P			
	Discourse		C403, 404	ECKD1H152KB	50V 1500P			
		CAPACITORS	C405-408	ECQB1H222JF3	50V 2200P			
			C409, 410	ECEA1HUR56B	50V 0.56U			
21-4	ECEA1HKA010B	50V 1U	C411, 412	ECEA1HKAR33B	50V 0.33U			
	ECEA1CKA220B	16V 22U	C413, 414	ECEA1EKA4R7B	25V 4. 7U			
25, 6	ECEA1CKA100B	16V 10U	C415, 416	ECEA1CKA100B	16V 10U			
27, 8			C601	ECKR2H682PE	500V 6800P △			
29, 10	ECBT1H561KB5		C603, 604	ECA1EM102B	25V 1000U △	 		
C11, 12	ECBT1H102KB5	50V 1000P		ECA1EMIOZB ECA1EU222EV	25V 2200U DMQ 🕰			
C13, 14	ECEA1AU101	10V 100U	C605		500V 6800P △	 		
C15, 16	ECQB1H822JF3	50V 8200P	C606	ECKR2H682PE		 		
C17-20	ECEA1EKA4R7B	25V 4. 7U	C607, 608	ECA1AM471B				
C21, 22	ECBT1H471KB5	50V 470P	C609, 610	ECKR1H103ZF5	50V 0.01U	 		
223	ECBT1H102KB5	50V 1000P	C612	ECA1HM470B	50V 47U			
224	ECEA1AU101	10V 100U	C613, 614	ECKR1H103ZF5	50V 0.01U	<u> </u>		
25, 26	ECQB1H472JF3	50V 4700P	C615, 616	ECEA1VU220	35V 22U ⚠	 		
227, 28	ECQB1H223JF3	50V 0.022U	C619, 620	ECA1AM102B	10V 1000U	 		
C29, 30	ECQB1H103JF3	50V 0.01U	C621, 622	ECEA1CKA470B	16V 47U			
C31, 32	ECQB1H223JF3	50V 0. 022U	C623, 624	ECBT1E103ZF	25V 0.01U			
C33, 34	ECQV1H563JZ3	50V 0.056U	C702	ECBT1E103ZF	25V 0.01U			
C37, 38	ECBT1H181KB5	50V 180P	C901	ECAOJM222B	6. 3V 2200U			
C39, 40	ECEA1HKAR47B	50V 0. 47U	C902, 903	ECKR1H103ZF5	50V 0.01U			
C41, 42	ECQB1H153JF3	50V 0.015U	C904	ECEA1EKA4R7B	25V 4.7U			
C43, 44	ECEA1EKA4R7B	25V 4. 7U	C905	ECEA1HKA010B	50V 1U			
C45, 46	ECBT1H561KB5	50V 560P	C906	ECEA1CKA100B	16V 10U			
C47, 48	ECKR2H101KB5	500V 100P	C911	ECEA1AU101	10V 100U			
C49, 50	ECQV1H104JZ3	50V 0. 1U	1					
C51, 52	ECEA1AU101	10V 100U	-			1	1	
C53, 54	ECEXIACIOI ECBT1H391KB5	50V 390P		 		1		
C55, 56	ECBT1C472KR5	16V 4700P	1			1		
	ECOB1H153JF3	50V 0.015U	┨───			1		
C57, 58						1		
C61, 62	ECQB1H153JF3					1		
C301	ECQP2A153JZT ECEA1EKA4R7B	100V 0. 015U 25V 4. 7U	╢			1		
C302				+		1		
C303	ECKR1H392KB5		╢	 		1		
C304, 305	ECKW1H222KB5					┨	 	
C306	ECKD1H682KB	50V 6800P		 		11		<u> </u>
C307	ECKR1H103ZF5					-}	 	-
C308	ECEA1AU221	10V 220U		1		╢		+
C309	ECKR1H103ZF5	 		1				
C310	ECKR1H472KB5	50V 4700P						-
C311	ECKR1H103ZF5	50V 0. 01U	_			╂	-	┼
C313, 314	ECKT1H223ZF	50V 0. 022U						
C315, 316	ECKR2H821KB5	500V 820P				1		
C317, 318	ECBT1H121KB5	50V 120P				11	1	1

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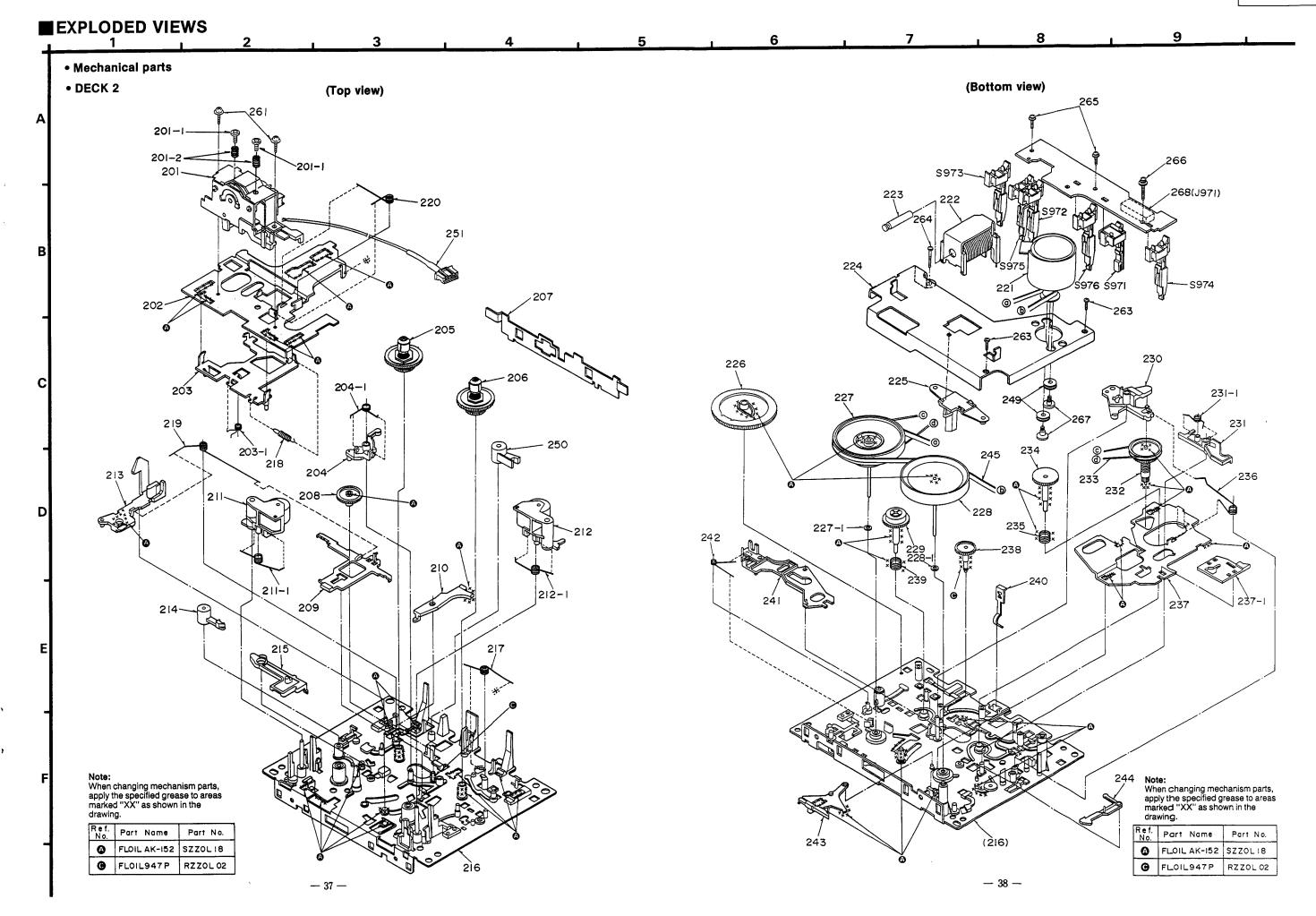


REPLACEMENT PARTS LIST

Note: [M] indicates in Remarks columns parts that are supplied by MESA.

Ref. No.	Part No.	Part Name & Description	Remarks	Re	Part No.	Part Name & Description	Remarks
				139	RUQ112ZA	SPRING	
		MECHANISM PARTS LIST		140	RUS6092C	TAPE PRESSURE SPRING	
				141	RUB514ZB	LEVER	
ECK1			, ,	142	RUW147ZA	SPRING	
01	RXQ0021	HEAD BLOCK (PLAYBACK)		143	RUB515ZA	LEVER	
01-1	RHE5152ZB	SCREW		144	RUB509ZA	LEVER	
01-2	RMB0331	CPRING		145	RDV108ZA	CAPSTAN BELT	
.02	RUA793ZF	CHASSIS		146	RUB507ZD	EJECT ROD(R)	
.03	RZLAR300A	LEVER ASS' Y		148	RUW144ZA	SPRING	
103-1	RUW143ZA	SPRING		149	RMG0102-1	RUBBER CUSHION	
104	1UB0089ZA	ARM		150	RNL180ZB	DAMPER ARM	
.04-1	RUW148ZA	SPRING		151	REXX0088	LEAD WIRE BLOCK(3P)	(M)
05	1DMO018ZB	REEL TABLE (R) ASS' Y		161	XTW2+6L	SCREW	
.06	1DMO0132B	REEL TABLE (F) ASS' Y		163	XTN26+7J	SCREW	
.07	RML0069-1	LEVER		164	RHE5203ZA	SCREW	
.08	RDG57722C	GEAR		165	XTW2+8S	SCREW	
100	 	BRAKE ROD	,	166	XYC2+JF16	SCREW	
	RUB508ZB	 		ł	RHD26002	SCREW	
110	RUB506ZB	LEVER		167	RHD26002	CONNECTOR (7P), J951	
111	1UB0088ZB	PINCH ROLLER (R) ASS' Y		168	MO/1/LA	00/ME010h(/r), J331	
111-1	RMB0310	SPRING		ļ			
12	1UB0087ZB	PINCH ROLLER (F) ASS' Y		 			
12-1	RUW140ZC	SPRING		 			
14	RNL1ZD	DAMPER ARM		 			
.15	RUB503ZD	MAIN LEVER		<u> </u>			
.16	RZUAR300A	CHASSIS ASS' Y		<u> </u>			
17	RUW1 42 ZA	SPRING		<u> </u>			
18	RUD105ZA	SPRING					
20	RUW139ZA	SPRING					
.21	RFM133ZA	DC MOTOR ASS' Y					
22	1UE0015ZB	PLUNGER	·				
.23	RUB428ZE	MOVING IRON CORE					
24	RMAD102-1	PLATE					
25	RMD5014ZC	SPACER					
26	RDG5927ZG	GEAR					
.27	1DW0037ZB	FLYWHEEL (F) ASS' Y					
27-1	RNW139ZA	WASHER					
28	1DW0038ZB	FLYWHEEL (R) ASS' Y					
28-1	RNW138ZA	WASHER		1			
29	1DG0006ZB	REEL TABLE GEAR ASS' Y		1			
30	RUB513ZD	LEVER		1			
31	1UB0091ZA	LEVER		 	1		
31-1	RUW146ZA	SPRING		11			
32	1DR0011ZB	PULLEY ASS' Y		1			
33	RDV90ZB	BELT		-			
34	RDG5769ZA	REEL TABLE GEAR		11			
35	RUQ111ZB	SPRING		1			
36	+	SPRING			 		
.37	RUW145ZA						
37-1	1UB0090ZA	ROD					
	RUB512ZB	ROD		 	-		
.38	RDG5773ZB	GEAR		1	-		
				1			

Ref. No.	Part No.	Part Name & Description	Remarks	Ref. No.	Part No.	Part Name & Description	Remarks
				241	RUB514ZB	LEVER	
DECK2				242	RUW147ZA	SPRING	
201	RXQ0019	HEAD BLOCK (REC. /PLAYBACK)		243	RUB515ZA	LEVER	
201-1	RHE51522B	SCREW		244	RUB5092A	LEVER	
201-2	RMB0331	SPRING		245	RDV108ZA	CAPSTAN BELT	
	RUA793ZF	CHASSIS		249	RMG0102-1	RUBBER CUSHION	
	RZLAR300A	ROD		250	RNL180ZB	DAMPER ARM	
	RUW143ZA	SPRING		251	REX0305-1	LEAD WIRE BLOCK(4P)	[MO
204	1UB0089ZA	ARM		261	XTW2+6L	SCREW	
	RUW148ZA	SPRING		263	XTN26+7J	SCREW	
205	1DM0018ZB	REEL TABLE (R) ASS' Y		264	RHE5203ZA	SCREW	
206	1DM00172B	REEL TABLE (F) ASS' Y		265	XTW2+8S	SCREW	
	RML0069-1	LEVER		266	XYC2+JF16	SCREW	
	RDG5772ZC	GEAR		267	RHD26002	SCREW	
	RUB508ZB	BRAKE ROD		268	RJS10T7ZA	CONNECTOR(10P), J971	
	RUB506ZB	LEVER		200	INSTUTZA	OOKALOTOR(101), 03/1	
211	1UB0088ZB	PINCH ROLLER (R) ASS' Y		 			
	RMB0310	SPRING					
212	1UB0087ZB	PINCH ROLLER(F) ASS' Y			<u> </u>		
212-1	RUW140ZC	SPRING		ļ .			
213	RUB541ZB	EJECT ROD (L)					
214	RNL1ZD	DAMPER ARM		 			
215	RUB503ZD	MAIN LEVER					
216	RZUAR300A	CHASSIS ASS' Y					
217	RUW142ZA	SPRING					
218	RUD105ZA	SPRING					
219	RUW167ZA	SPRING					
220	RUW139ZA	SPRING					
221	RFM133ZA	DC MOTOR ASS'Y					
222	1UE0015ZB	PLUNGER					
223	RUB428ZE	MOVING IRON CORE					
224	RMA0102-1	PLATE					
225	RMD5014ZC	SPACER					
226	RDG5927ZG	GEAR					
227	1DW0037ZB	FLYWHEEL (F) ASS' Y					
227-1	RNW139ZA	WASHER					
228	1DW0038ZB	FLYWHEEL (R) ASS' Y					
228-1	RNW138ZA	WASHER					
229	1DG0006ZB	REEL TABLE GEAR ASS' Y					
230	RUB513ZD	LEVER					
231	1UB0091ZA	LVER					
231-1	RUW146ZA	SPRING					
232	1DR0011ZB	MAIN PULLEY ASS' Y			,		
233	RDV90ZB	BELT					
234	RDG5769ZA	REEL TABLE GEAR					
235	RUQ111ZB	SPRING		l 			
236	RUW145ZA	SPRING		l — —			
237	1UB0090ZA	ROD		 			
237-1		ROD					
238	RUB512ZB			 			
	RDG5773ZB	GEAR		ł 			
239	RUQ112ZA	SPRING		 			
240	RUS609ZC	TAPE PRESSURE SPRING	<u> </u>] [<u> </u>		



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■ REPLACEMENT PARTS LIST

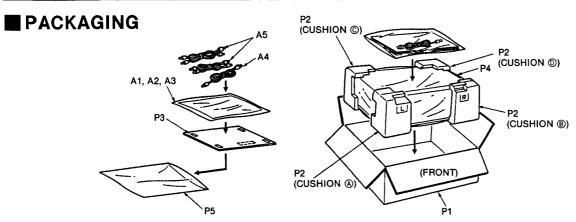
Notes: *Important safety notice: Components identified by Δ mark have special characteristics important for safety.

Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used.

When replacing any of components, be sure to use only manufacturer's specified parts shown in the parts list.

*[M] Indicates in Remarks columns parts that are supplied by MESA.

Ref. No.	Part No.	Part Name & Description	Remarks	Ref. No.	Part No.	Part Name & Description	Remark
				32	XTB3+20JFZ	SCREW	
		CABINET AND CHASSIS		34	RFKNSTR252PK	FOOT ASS' Y	[M]
				35	XTB3+6J	SCREW	
i	RKM0260-1K	CABINET					
2	RFKLSTR262PK	CASSETTE LID ASS'Y (DECK1)	[M]			PACKING MATERIAL	
}	RFKLSTR252PB	CASSETTE LID ASS' Y (DECK2)	[M]				
1	SNE2129-1	SCREW		P1	RPG2306	CARTON BOX	[M]
5	XTBS3+8JF21	SCREW		P2	RPN0296	CUSHION	
6	RGRO112K-B1	REAR PANEL	[M]	P3	RPQ0164	ACCESSORIES PAD	
7	RMK0026-7	BOTTOM CHASSIS		P4	RPF0100	PROTECTION COVER (THIS UNIT)	(M)
8	RKQ0089	P. C. B. HOLDER		P5	XZB24X34C04	PROTECTION BAG (F. B. , ACC.)	
9	RMN0112	FL HOLDER					
10	RFKNSDN7AK	DAMPER GEAR ASS' Y(L)				ACCESSORIES	
11	RFKNSDN7BK	DAMPER GEAR ASS' Y(R)					
12	RFKGSTR262PK	FRONT PANEL ASS' Y	[MO]	A1	RQT2705-P	INSTRUCTION MANUAL	[M]
12-1	RKW0139A-K1	TRANSPARENT PLATE		A2	RQA0085	WARRANTY CARD	
13	RGU0030	BUTTON, POWER		A3	RQCB0391	SERVICENTER LIST	
14	RGU0070	BUTTON, EJECT		A4	SJA172	AC POWER SUPPLY CORD	Δ
15	RGU0520A-K	BUTTON, OPERATION (DECK1)		A5	SJP2249-3	STEREO CONNECTION CABLE	
16	RGU0519A-K	BUTTON, OPERATION (DECK2)					
17	RFKNSTR232P	BUTTON ASS' Y, SYNCHRO				<grease jig="" or="" tool=""></grease>	
18	RGW0109-K	KNOB, REC LEVEL				TEST TAPE	
19	RGW0110-K	KNOB, BALANCE					
20	RKF0169A-K	CASSETTE HOLDER		SA1	QZZCFM	OVERALL ADJUSTMENT CHECK	
20-1	QBP2006A	TAPE PRESSURE SPRING		SA2	QZZCWAT	TAPE SPEED ADJUSTMENT	
21	RMA0406	EJECT ANGLE		SA3	QZZCRV2	BLANK TAPE (Normal Position)	
22	RMA0407	MECHANISM ANGLE		SA4	QZZCRX1	BLANK TAPE (CrO2 Position)	
23	RME0068-1	SPRING		SA5	QZZCRZ5	BLANK TAPE (Metal Position)	
24	RML0185-1	EJECT LEVER(L)					
25	RML0186-1	EJECT LEVER (R)				GREASE	
26	RMMO014	EJECT ROD					
27	XTBS26+8J	SCREW		SA6	SZZOL18	FLOIL AK-152	
28	XTB3+10JFZ	SCREW		SA7	RZZOLO2	FLOIL947P	
30	SJS9331A	AC OUTLET COVER					



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